6 Reasons to get excited about **El Capitan**

Macworld

APPLE MUSIC IS LIVE
Despite some early stutters, Apple's streaming service rocks

iMAC WITH RETINA 5K DISPLAY REVIEWED

I was one of the **1** in **5** Children in America who STRUGGLE WITH HUNGER join me and help put an End to childhood hunger.

Viola Davis

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THE SAFEWAY FOUNDATION

The *Hunger Is* campaign is a collaboration between The Safeway Foundation and the Entertainment Industry Foundation to raise awareness and improve the health of hungry children.

EIF ENTERTAINMENT INDUSTRY FOUNDATION

The Safeway Foundation and the Entertainment Industry Foundation are 501(c)(3) tax-exempt organizations. Photo by: Nigel Parry

Macworld INCORPORATING MACUSER
August 2015 CONTENTS

Hands on with Apple Music **88**

6 reasons to get excited about
OSX El Capitan **98**

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No, WSJ, Apple shouldn't kill off the Mac

A Wall Street Journal piece that argues Apple should kill the Macintosh line completely ignores Apple's fundamental thinking about its future.

BY GLENN FLEISHMAN

The *Wall Street Journal* isn't trolling us, is it? Columnist Christopher Mims penned an essay titled, "Why Apple Should Kill Off the Mac" (go.macworld.com/thews, it's behind a paywall), and goes on to enumerate various reasons. But it ignores the elephant—or El Capitan—in the room: Apple will never again let another company decide its destiny.

Mims's thesis is that Apple is stretched so thinly, it cannot design new Macs and produce an operating system for them while maintaining its focus on making the best products in the world. The iPhone, iPad, and Watch suffer because Macs still exist, he posits. No longer investing in "one-of-a-kind feats of engineering like the Mac Pro" would free the company to go all-in on the future of mobile and wearables. (Disclosure: I know Chris a little and think he's generally a smart fellow.)

This seems like yet another variant on the "Apple is doomed" gong that has sounded so often that the Macalope (go.macworld.com/maca-lope) has to pick and choose what it writes about. Once upon a time, I thought that mythical beast would run out of material. Now I don't know why I ever believed that.

But Mims's essay is more subtle and worth taking more seriously because he believes Apple is being held back by putting resources into "being king of a last-century technology." Macs account for less than 10 percent of Apple's revenue in the current quarter and an unknown but significant percentage of profit, likely punching above their revenue percentage because of continued high margins.

I'm a firm believer that Apple's fit and finish needs work on the software side. On my personal blog, I posted a lengthy list of Yosemite and iOS 8 bugs and implementation issues in January under the title, "The Software and Services Apple Needs to Fix" (go.macworld.com/glennf). It received almost 200,000 views and more than 400 comments on what I thought

would be just me complaining about bad quality assurance before they let releases out the door. It resonated.

But I fear that Mims is pushing away details like Apple's fundamental view of itself, its software engineering process, and its hardware development. Let's forget the fact that any other company would kill for the revenue, growth, margins, and profits that the Macintosh line counts for on its own.

HARDWARE SPIT AND POLISH, SOFTWARE SPIT

Apple doesn't have a hardware manufacturing problem. The Watch was "delayed" in that it clearly shipped later than Apple had originally intended, and had signaled through intentional leaks. But when it finally did ship, it emerged as a thing

of relative perfection compared to other Apple products and especially to most other wearables.

The new 12-inch MacBook is the pinnacle of Apple's manufacturing perfection for computers, despite people's complaints about it bearing just one USB-C port. Even if you hate the keyboard (and I've gotten used to it), it works precisely as advertised.

Apple's hardware engineering all feeds back across its product lines. While other firms have distinct divisions that become "silos," in which there's very little cross-product interaction, one of Steve Jobs's key managerial missions was to prevent silos from forming. It makes micro-management from the top very easy, but it also means that two or more parts of the company aren't solving precisely the same problem.

8

The 12-inch MacBook's absurdly tiny main board and overall design is absolutely informed by the iPad. The engineering to create terraces of batteries in the MacBook will likely be used in future iOS devices. Apple bought a chip-design firm and continues to acquire technology around it so that it can use its own designs across its products.

The same companies, parts, and product lines make all of Apple's products, and all feed back together across them. While the iPad was secretly being designed in a lab for years before its release, the MacBook Air was strutting out there in public solving problems that led to solutions in a mobile device.

Apple doesn't drop everything to design new Macs. It folds in the lessons learned from everything it does to make new ones. The new Mac Pro's unique design—some love it, some think it looks like a fancy garbage can—didn't gobble up massive resources at Apple. There's nothing in the hardware that pushed any envelopes; it was a design and manufacturing challenge of the sort Apple constantly solves. And it was a "gift" to developers and professional users, to show they were still thinking about them, which I'll say more about in a moment.

As for software, you're not going to find me saying that all is rainbows and unicorns. However, because of the parallel trees of development across OS X and iOS, along with similar trees for its other products (the AirPort Extreme Base Station and Apple TV, and so on), much of the work that goes into improving

system releases is across platforms.

The issues that I and others complained about in iOS 8 and Yosemite, some of them fixed since January, are at a higher level of software development, which consumes a much smaller percentage of the whole. Sometimes, it's presentation; sometimes interaction; sometimes cloud services. iCloud problems aren't a Mac problem, although sometimes it's OS X that's at fault in a sync.

But software troubles aren't solved by focus. They're solved by good management, good processes, and enough time. Apple rebuilt its management in 2012, leading to Jony Ive taking over interface development alongside industrial design. This resulted in two years of software turmoil, as fundamental engineering and top-level user experience was changed. We all cried out for a pause, and Apple's WWDC 2015 announcements of iOS 9 (go.macworld.com/ios9) and El Capitan (OS X 10.11, go.macworld.com/capitan) indicate it's ready, too: Its maintenance releases, with only one major new flagship feature—in iOS. (That would be simultaneous app usage on certain iPad models, go.macworld.com/postpc.)

Not having the Mac, as Mims would prefer, would have reduced some of how thinly Apple was spread. But this transition is over, and Apple is back into a building stage, in which it reaps

the rewards of the software engineering performed since 2012 and new hardware released in the last two years: the Mac Pro, the 5K iMac, and the 12-inch MacBook.

This would be the worst time of all for Apple to stop making Macs.

THE MAC IS NOT A TYPEWRITER

The Mac isn't just a flagship product, despite its reduced share of revenue, and the reduced importance of personal computers in the universe of all computing devices. It's the foundation on which everything Apple is today was built. It also remains the foundation of its longest-

REMEMBER WHEN iPhones looked like this?

term, most loyal customers. Not fanboys, but women and men who have used a Mac for 10, 20, or even 30 years because it fits them best.

Yes, Apple regularly kills its darlings and pisses off its best customers. Dumping OS 9 for the NeXT-derived OS X—a necessary and painful step. Moving from the dead-end of PowerPC processors to an Intel architecture. Embracing Microsoft to bring Office back to the Mac, then developing its own productivity suite. Going all-in on "flat" design with Yosemite. Delaying a true Mac Pro refresh for years, then producing an aesthetically pleasing high-performance system. Releasing a laptop with—get this—one port!

Those core users were mostly the ones who bought the first iPhones, because no other smartphone platform worked well with the Mac. They bought the first iPads, because they liked the iPhone. It's only in the last three years or so that Apple's mobile audience has grown largely outside the universe of Mac owners.

Killing the Mac means a stake through the hearts of tens of millions or more users who grew up with that computer. It means walking away from thousands of software companies, including key partners like Adobe (part of the WWDC keynote).

But let's pretend that even that isn't important, and Apple could weather it.

Apple will never again cede its future to other firms' control. It's why Apple makes its own chips, buys industrial-manufacturing firms that create special tools which it puts into its assembly partners' factories, and even blows a wad of cash on a failed

attempt to generate more sapphire screens.

And it's why it has its own computer platform: 100 percent of software development for the iPhone, iPad, and Apple Watch (and Mac apps) occurs on Macs. There's no other way to assemble software for those devices. Even with the highest-end Mac hardware currently available, developers strain against the amount of time it can take to compile and test builds, whether in Mac-based emulators or when cross-loaded onto a developers' test devices.

The Mac, at some level, is a highly profitable developer-platform division that happens to also serve consumers and businesses.

Apple abandoned its Xserve rack-mounted server lineup years ago, and even though its still offers OS X Server, it's a very thin product compared to what most businesses need. Apple refocused on consumer, education, small business, and a few large companies that either let employees bring their own computers, choose a platform for their desktop, or require Macs as a business choice.

What's more, graphics and video professionals represent a significant portion of Apple's highest-revenue and highest-margin Mac sales, and also, not surprisingly, have dispos-

able cash that they just might be using to buy iPhones, iPads, and Apple Watches.

FORWARD IN ALL DIRECTIONS?

Mims is right that Apple has a lot to fix. Despite its confusing Apple Music (go.macworld.com/applemusic) launch, WWDC showed that the company is dedicated to that task by putting the brakes on, and maturing, its three platforms—iOS, OS X, and watchOS.

Focus is great, but the Mac isn't as much of a distraction as Mims wants it to be. Apple's problem right now seems to be software and services execution, with more trouble still on the cloud side than fundamental on-device issues in iOS and OS X.

Mims suggests of the Mac line, "Apple doesn't need this revenue." That seems misguided. In terms of the ecosystem and goodwill alone, there's a large halo. But beyond that, Apple will never again make the mistake of giving any other company the power to veto its future.

The Mac will abide so long as Apple doesn't lose its way. ■

> **KILLING THE MAC MEANS A STAKE THROUGH THE HEARTS OF TENS OF MILLIONS OR MORE USERS WHO GREW UP WITH THAT COMPUTER.**

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Nick Jonas,
Think It Up Ambassador

How to set up iCloud Family Sharing on a Mac

Family Sharing gives your family access to purchases in iTunes, iBooks, and the App Store.

BY ROMAN LOYOLA

With iOS 8, Apple introduced Family Sharing, a way for a group of people to share purchased iTunes, iBooks, and App Store items. If Mom buys a TV show, the other people in the group (up to six people) can access that show, too. Parents can control what the kids buy, and Family Sharing can be used with photos, calendars, and more.

You can use Family Sharing on a Mac, as well as set up a Family Sharing account. In this how-to, we'll take you through the steps of setting up Family Sharing on a Mac. In order to use Family Sharing on your Mac, you must be running OS X Yosemite or later.
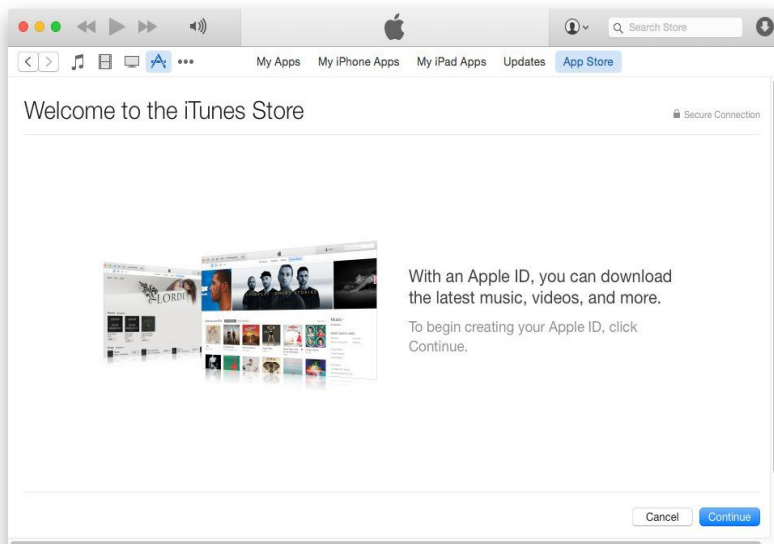
1. SET UP YOUR APPLE IDS
Chances are, you and your family members already have Apple IDs. You're asked to create one during the setup of a new Mac or iOS device. If you or a family member doesn't have an Apple ID, you need to create accounts. Here's how:

• Create an Apple ID on a Mac, PC, or iOS device using iTunes (go. macworld.com/createid).

• Already have an account but

can't remember your account information? Here's how to find your Apple ID (go.macworld.com/appleid).

You can create Apple IDs for children under 13, but first, you must create a Family Sharing account.

You will also need a credit card that will be used as the Family Sharing's method of payment.

2. iCLOUD SYSTEM PREFERENCES

On your Mac, go to the Apple menu and select System Preferences. In

the System Preferences window, select iCloud.

In the iCloud window, you'll see a listing of your iCloud services on the right. We're interested in the left side, specifically, the Set Up Family button. Click it and move on to the next step.

3. INTRO TO FAMILY SHARING

After you click Set Up Family, you'll go through the steps to create a Family Sharing account. The first window you'll encounter provides an introduction. If you want more info about Family Sharing, click the Details button, which will open your browser to Apple's Family Sharing (go. macworld.com/family) website. Click Continue and we'll go to the next step.
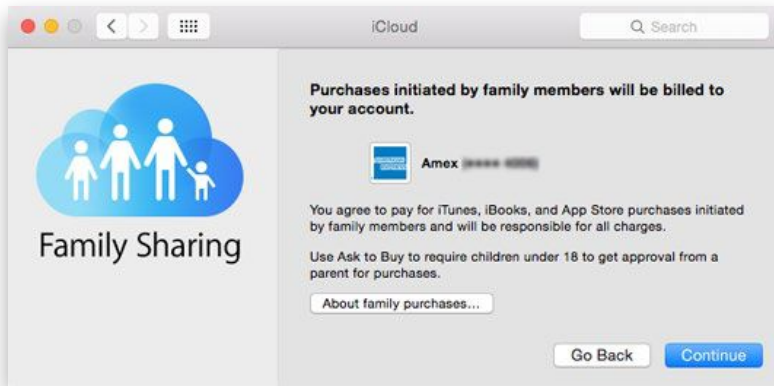
4. THE ORGANIZER

In Family Sharing, one person is

designated as the family organizer. This person manages the members and pays for the items purchased by the group.

This screen shows the account that is being used to create the Family Sharing. Click Continue for the next step.

(If you want someone else to be the organizer, click Continue anyway. You can designate a different organizer in the next step.)

5. DIFFERENT ORGANIZER

Here you can assign another person the role of organizer. If you don't want to do this, click Continue.

If you do want to make another person the organizer, click Use A Different Account. This will take you to a window where you enter the Apple ID name and password of the person you want to be the organizer. Click Continue when you're ready to move on.

6. CREDIT CARD

In this step, the credit card associated to the Apple ID appears. It will be used when members of the Family Sharing account make a purchase.

To learn more about family purchases, click the About Family Purchases button. This will launch a browser window with Apple's website on family purchases and payments (go.macworld.com/familypay).

Click Continue.

7. SHARE LOCATION

You can let people know where you are (or at least where your device is) by activating this feature.

If you log in to your iCloud.com account, you can use Find My iPhone to locate your iOS devices as well as your Macs.

On an iOS device, this feature will share your location on Messages and Find My Friends.

Make a selection. If you decide to select Not Now, you can change this later in the iCloud system preference by clicking the Find My Mac box. Click Continue.

8. ADD FAMILY MEMBERS

Now you can add up to five other family members to the account. A window will appear, with an Apple ID listing on the left, and an Add Family Member button on the right. Click the button to add a member.

9. ADULTS AND KIDS

For someone who has an Apple ID,

ADD family members

enter the email address for that person's Apple ID account. You'll then be asked to enter the security code of the credit card on file. When you click Continue, you can either enter the Apple ID password of the new member, or you can send an email invitation. After that, you're done.

Or you can create an Apple ID for a child. In this case, select the button for this option. Click Continue. Go to the next step in this tutorial.

10. CREATE A CHILD APPLE ID

To create an Apple ID for a child, fill out the form that appears on-screen. If the email address you are trying to create is taken, you'll be asked to try a new one.

When you fill out the info properly

and click Continue, you'll be asked to confirm that you want to create the account.

The next few steps involve:

• Entering the security code for your credit card

• Choosing security questions

• iCloud and Game Center terms and conditions

• iTunes terms and conditions

• Entering the Apple ID password of the organizer

One more step and we're done.

11. ASK TO BUY

When you're done adding and creating Apple IDs, you'll be taken to the top level of the iCloud Family Sharing settings. If you click on a member entry on the left, you'll see

a profile on the right. Here you can resend invitations, activate/deactivate the Ask To Buy option, and turn on or off the ability of that member to see your location.

To add another member, click on the **+** button on the lower left. To remove a member, click on the **–** button.

To go back to these settings at a later date, go to *System Preferences ➜ iCloud* and click the Manage Family button. You're done.

We have more details about Family Sharing (go.macworld.com/family-sharing), the risks (go.macworld.com/famsharingrisks), and how to activate Family Sharing on an iPhone or iPad (go.macworld.com/famsharingios8) on our site. ∎

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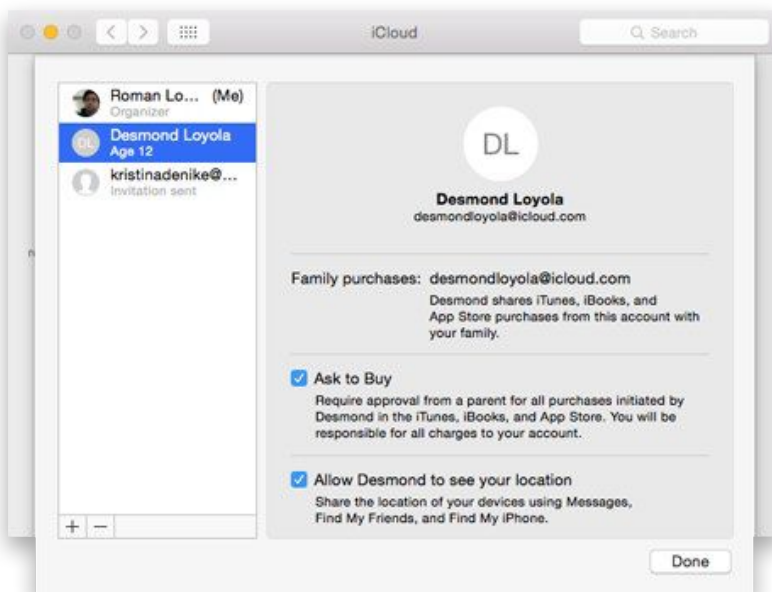
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DESKTOPS

iMAC WITH RETINA 5K DISPLAY: NEW $1,999 MODEL ALMOST AS GOOD AS ITS PREDECESSOR

BY ROMAN LOYOLA

WHEN APPLE RELEASED the first 27-inch iMac with Retina 5K display late last year, all it took was just one look at the gorgeous images on the display and you knew you wanted it. Then you took a look at the $2,499 price tag and suddenly you didn't want it as much as you thought.

So maybe you forgot about the Retina 5K iMac, until Apple announced a new, lower-priced model (go.macworld.com/cheaper) this year in May. The new Retina 5K iMac (apple.com/imac-with-retina) is $1,999, which isn't as scary a price. (Also, the $2,499 Retina 5K iMac was reduced to $2,299.)

APPLE 27-INCH iMAC/3.3GHZ WITH RETINA 5K DISPLAY (MID-2015)

AT A GLANCE:
The $1,999 iMac with Retina 5K display is just about as good as its more expensive predecessor. The display dazzles, and the performance will be appreciated by everyday users.

PROS:
- Gorgeous display
- Very good performance overall

CONS:
- Hard drive will affect performance on disk-intensive tasks

PRICE:
$1,999

COMPANY:
apple.com

HOW TO MAKE IT MORE AFFORDABLE

There are three major differences between the new $1,999 Retina 5K iMac and the $2,299 Retina 5K iMac. These three components are slightly slower in the new model than the ones in the more expensive model.

(**QUICK REFERENCE CHART:** Apple's current Mac desktop lineup, go.macworld.com/currentmacs)

The first component is the processor. It's still a quad-core Core i5 processor, but it's a little slower: 3.3GHz with Turbo Boost up to 3.7GHz, compared to 3.5GHz (3.9GHz Turbo Boost) in the $2,299 model.

The second is storage. The $1,999 Retina 5K iMac comes w ith a 1TB hard drive. Even though it's a 7200-rpm drive, it's not as fast as the 1TB Fusion Drive in the $2,299 model. (You can upgrade to a Fusion Drive for an additional $200.)

The third is graphics. The $1,999 Retina 5K iMac has a 2GB AMD Radeon R9 M290 graphics, which is a notch down performance-wise from the $2,299 Retina 5K iMac's 2GB AMD Radeon R9 M290X.

Everything else about the $1,999 Retina 5K iMac is the same as its more-expensive sibling. You get 8GB of RAM installed as a pair of 4GB SO-DIMMs, leaving two of the four slots open for upgrades. You get a built-in FaceTime camera, four USB 3 ports, two Thunderbolt 2 ports, a Gigabit Ethernet port, a SDXC card slot, a headphone jack, and a Kensington lock slot.

THE RETINA DISPLAY IS GORGEOUS

Of course, there's the marquee feature of this iMac, the display. The same 27-inch IPS (go.macworld.com/ips) display is used in both Retina 5K iMac models. It has a native 5120 by 2880 resolution, and in case you're wondering, Apple's default resolution setting in the Displays system preference is 2560 by 1440 (which you can turn up or down).

What Chris Breen wrote in his review of the 3.5GHz Retina 5K iMac (go.macworld.com/27inch) still holds true for the $1,999 Retina 5K iMac. To summarize: Compared to a 27-inch iMac with a standard display, text looks much crisper, and images are smoother. The differences are more

noticeable on high-resolution images and video.

When I switched to using a Retina MacBook Pro every day, I thought, "Yeah, the display is nice, but really, what's the big deal?" After a long period on the Retina MacBook Pro, I switched back to using a laptop with a standard display, and I finally realized what the big deal was all about. With the Retina 5K iMac, the crispness and clarity was much more immediately noticeable to me, perhaps because I'm much more attuned to using a Retina display, or because the size of the screen makes a bigger impression.

For some users, a Retina display is a luxury—there's nothing wrong with Apple's standard display, which produces good image quality. But if you deal with the details all day long—either in text, images, video, or all three—you'll appreciate looking at the Retina display. I'd even say it could help you be more productive.

That being said, the glossy display makes the iMac a nonstarter for some users, Retina or not. Apple has made improvements so the glare and reflections aren't as severe as in older iMacs, but there's a contingent of users who really want or need a matte display. I'll repeat what's been said before in past Macworld iMac reviews: If you want a matte display, you'll never find it in an iMac. You need to make other arrangements, like connect an external matte display or buy a headless Mac.

THE LOGIN SCREEN when running the Retina 5K iMac at its native 5120 by 2880 resolution. In order to set the Retina 5K iMac at this resolution, you need a third-party resolution-switching app.

LOWER PRICE, SLIGHTLY LOWER PERFORMANCE

Since the new $1,999 Retina 5K iMac has a 3.3GHz processor, you probably expect it to be a few notches slower than the $2,299 Retina 5K iMac with its 3.5GHz processor. And that's what the benchmarks show.

The Geekbench 3 (primatelabs.com/geekbench) results show that the $1,999 Retina 5K iMac is 4 percent slower than the $2,299 Retina 5K iMac in the 64-bit multicore and single-core tests, and 3 percent slower in the 32-bit multicore and single-core tests. The $1,999 Retina 5K iMac is also 4 percent slower in the Cinebench R15 CPU test. And in the Cinebench R15 OpenGL video test, the two machines posted similar results.

These benchmarks isolate certain components of the system—mainly the CPU and graphics—and the $1,999 Retina 5K iMac doesn't really disappoint when compared to the $2,299 Retina 5K iMac. The main difference is the $1,999 Retina 5K iMac's 7200-rpm hard drive—it'll adversely affect the machine's performance on disk-intensive tasks. The $2,299 Retina 5K iMac has the advantage in this regard, with its 1TB Fusion Drive. You can upgrade the $1,999 Retina 5K iMac with a 1TB Fusion Drive, but the upgrade jacks up the price to $2,199, and at that point, you should just go with the $2,299 Retina 5K iMac.

If it's pure multiprocessing speed that you need, the better choice is a Mac Pro. Even though the current Mac Pro is getting to be long in the tooth—it was released in December 2013—it still sports better multicore performance. But you'll have to buy a separate 5K display like the Dell UltraSharp 27 UP2715k (go.macworld.com/dellultra), which costs $2,500, more than either Retina 5K iMac. Or you can save some money and get an affordable 4K display. (You also need to be running OS X 10.10.3 or later.)

You can take a look at the Geekbench 3 and Cinebench benchmark charts online (go.macworld.com/imacbenchmarks). Also included are numbers from the $2,299 Retina 5K iMac, the quad-core and six-core Mac Pro, the standard 27-inch iMac, and more.

BOTTOM LINE

The iMac with Retina 5K display is one of the most impressive desktop computers to come from Apple, and now there are two models from which to choose. The $1,999 Retina 5K iMac is the better choice as an everyday computer for typical users—you probably won't notice the performance hit from the hard drive when using the Internet, working in productivity apps, putting together a short home video, or organizing the pictures you took for the day. Professionals and power users looking for a production machine to handle long video renders, high-detail photography, audio, and more should opt for the $2,299 model with its Fusion Drive. ■

LAPTOP ACCESSORIES

THUNDERBOLT 2 DOCKS: THE EASY WAY TO CONNECT TO YOUR MAC LAPTOP

BY ROMAN LOYOLA

THE MAJOR CHANGE since I last did a roundup of Thunderbolt docks (go.macworld.com/roundup1) is that the latest docks use Thunderbolt 2, which makes them aligned with Apple's Thunderbolt 2 implementation in its MacBook Pro and MacBook Air.

The market has also grown a little, with a few more offerings to consider. But essentially, the basic functionality of the docks is the same as before: You plug in your display, hard drives, printer, ethernet, headphones, USB devices, and whatever else into the dock, then you connect the dock to your laptop via a single Thunderbolt 2 connection. When you want to take your laptop, you only need to unplug a single cable. When you return to your desk, all you have to do is connect one cable.

In this roundup, I tested seven docks that all use Thunderbolt 2. Some of the docks are quite similar in design, while others are vastly

THUNDERBOLT 2 DOCKS

AKITIO THUNDER2 DOCK

♦♦♦½

$279

BELKIN THUNDERBOLT 2 EXPRESS DOCK HD

♦♦♦

$300

CALDIGIT THUNDERBOLT STATION 2

♦♦♦♦½

$235

ELGATO THUNDERBOLT 2 DOCK

♦♦♦♦

$230

KANEX THUNDERBOLT 2 EXPRESS DOCK

♦♦♦

$250

OWC THUNDERBOLT 2 DOCK

♦♦♦♦½

$249

STARTECH THUNDERBOLT 2 4K DOCKING STATION

♦♦♦♦

$329

different. All of the docks require a power adapter. All of the manufacturers tout their dock's ability to support 4K monitors, though this is a function of Thunderbolt 2 (go.macworld.com/function) and not necessarily a dock-specific feature.

I wasn't able to boot from a Yosemite install USB flash drive (go.macworld.com/flashinstall) plugged into the USB port of any of these docks, even though the drive appeared as a bootable drive in System Preferences. You'll need to plug the boot drive directly into a port on your Mac laptop.

> **WHEN YOU WANT TO TAKE YOUR LAPTOP, YOU ONLY NEED TO UNPLUG A SINGLE CABLE. WHEN YOU RETURN TO YOUR DESK, ALL YOU HAVE TO DO IS CONNECT ONE CABLE.**

All the docks tallied similar results when I tested USB 3 drive performance. Using the Aja System Test (go.mac-world.com/aja) and a VisionTek USB Pocket SSD (go.macworld.com/visiontek), the docks had read speeds of about 330 MBps and write speeds of about 280 MBps on a mid-2014 15-inch 2.2GHz Core i7 Retina MacBook Pro. All the docks were tested with Gigabit Ethernet, headphones, and an Apple Thunderbolt Display (go.macworld.com/atdisplay) connected to each dock. (For your reference, the read/write speeds of the VisionTek drive connected directly to the laptop's USB 3 port were 400.3/361.3 MBps.)

One final thing before diving into the products. I tested the docks with a MacBook Air and MacBook Pro. A dock would be ideal for the new MacBook since it has the lone USB-C port, but there's currently no way to connect a MacBook to one of these docks—USB-C–to–Thunderbolt adapters don't exist. (Are they even feasible?) There's at least one MacBook dock in the works called the HydraDock (hydradock.com), and there are probably more coming soon.

CALDIGIT THUNDERBOLT Station 2 rear ports

TOP CHOICES
CalDigit Thunderbolt Station 2
At $235 with a 1-meter Thunderbolt cable ($200 without), the CalDigit Thunderbolt Station 2 (●●●●½, caldigit.com/thunderboltstation2) is a pretty good deal. CalDigit didn't go with a long, brushed aluminum box design the other docks sport. Instead, the Thunderbolt

Station 2 uses a handsome vertical standing Titanium Grey aluminum box (CalDigit provides rubber feet to let you rest the dock on its side).

The CalDigit dock is one of three docks that I looked at that has eSATA; there are a pair of eSATA ports on the rear, along with two Thunderbolt 2 ports, two USB 3 ports, Gigabit Ethernet, and HDMI. The front has a USB 3 port, a microphone jack, and a headphone jack.

On the CalDigit website, you can download the CalDigit Thunderbolt Station Utility (caldigit.com/support.asp). This adds a menu-bar item that allows you to eject any items that are connected to the dock and are on your Mac's desktop.


CALDIGIT THUNDERBOLT
Station 2 front

OWC Thunderbolt 2 Dock

Compared to the other docks in this roundup, OWC offers a whole lot of dock for $249. With the Thunderbolt 2 Dock (🔲🔲🔲🔲½, go.macworld.com/owct2), you get five USB 3 ports, two on the side and three on the rear. It's one of two docks in this roundup with a FireWire 800 port, which is great if you have an older hard drive that's still a vital part of your setup. The dock also has the standard issue of ports: two Thunderbolt 2 ports, a Gigabit Ethernet port, and an HDMI port.

Like the Elgato dock, OWC's dock has separate microphone and audio-out ports. But unlike the Elgato dock, these two ports are on the rear, not the front.

The one knock against the OWC Thunderbolt 2 Dock is that it doesn't include a Thunderbolt cable. OWC does sell Thunderbolt cables in different colors (black, red, green, blue, and white) and in different lengths (0.5 meter to 30 meters).
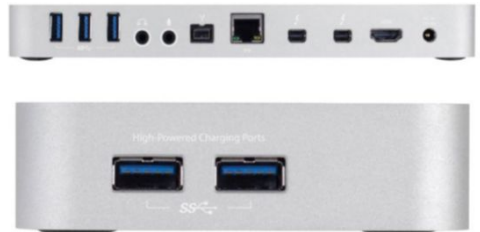
OWC THUNDERBOLT 2
Dock ports

TOP CONTENDERS
Elgato Thunderbolt 2 Dock

Elgato's $230 Thunderbolt 2 Dock (🔲🔲🔲🔲, go.macworld.com/elgatot2) has a brushed aluminum case that matches your Apple laptop. The front has a USB 3 port, a mic jack, and an amplified headphone jack. The back has a

Gigabit Ethernet port, two USB 3 ports, two Thunderbolt 2 ports, and an HDMI connector. Elgato includes a 0.5 meter Thunderbolt cable. All of the USB ports provide enough power to charge any iOS devices.

Elgato's dock was the only other dock in this roundup that includes a software utility to enhance the dock. Like the CalDigit utility, the Elgato Thunderbolt Dock Utility resides in your Mac's menu bar for one-click ejecting of any connected dock devices from the Desktop.

ELGATO THUNDERBOLT 2
Dock rear ports

StarTech Thunderbolt 2 4K Docking Station

At $329, the Thunderbolt 2 4K Docking Station (🌢🌢🌢🌢, go.macworld.com/startech) is the most expensive dock in this group. It's also the longest dock, measuring 9.2 inches, and its design hearkens back to the old aluminum Mac Pro tower.

STARTECH THUNDERBOLT 2 4K
Docking Station rear ports

The Thunderbolt 2 4K Docking Station is the only dock I looked at that has an S/PDIF (go.macworld.com/spdif) connector on the rear. The rear also has three USB 3 ports, a microphone jack, one eSATA port, Gigabit Ethernet, HDMI, two Thunderbolt 2 ports, and a security lock slot. The front has a USB 3 port and headphone jack.

StarTech includes not one, not two, but three different power cords, one each for the United States, United Kingdom, and European Union. The company also includes a Thunderbolt cable.

REST OF THE PACK
Akitio Thunder2 Dock

Most of the docks in this roundup resemble nicer-looking KVM switches, but the $279 Thunder2 Dock (🌢🌢🌢½, go.macworld.com/akitio) takes a different approach: from a distance, the device looks like a portable hard

drive. And instead of lining up the ports on the rear (with a few ports on the front for quick access), the Akitio dock has ports on three of its four sides. So instead of your cables being hidden from view (for the most part) in the rear, the cables are in plain sight. The Akitio's design could be more functional for you, especially if you are connecting and discon-necting devices frequently—but if you aren't, the Akitio design leads to a potentially messy cable layout.

With two eSATA ports, a FireWire 800 port, and two USB 3 ports (that can charge your iOS device), the Akitio Thunder2 Dock is geared for someone who needs flexibility with attaching storage devices to a Mac. The dock does have two Thun-derbolt 2 connectors and you can connect a Thunderbolt or mini DisplayPort display. There's no Gigabit Ethernet, audio connectors, or HDMI. When you consider the $279 price (Thunderbolt cable included) and the ports, the Akitio dock fills a niche that's different than the other docks.

AKITIO THUNDER2 Dock ports

Apple Thunderbolt Display

The $999 Thunderbolt Display (apple.com/displays) can be used as a dock. The problem is that the product hasn't been updated since it was released in 2011, before USB 3 and Thunderbolt 2 were available on the Mac. It has USB 2.0 ports and it has the first-generation Thunderbolt implementation instead of Thunderbolt 2.

If you don't care about performance, the Thunderbolt Display will work well, and you won't have another device taking up space on your desk. The display has three USB 2.0 ports, a FireWire 800 port, Gigabit Ethernet, and a security slot. There's also a built-in Thunderbolt cable that you plug into your laptop, as well as a Thunderbolt port.

REAR PORTS on the Apple Thunderbolt Display

If you do care about performance, then you should know that in the Aja System Test, the Thunderbolt Display posted USB drive read speeds

of 25.2 MBps and write speeds of 9.9 MBps—
slow when compared to USB 3.

Belkin Thunderbolt 2 Express Dock HD
The $300 Thunderbolt 2 Express Dock HD
(♦♦♦, go.macworld.com/belkin2) is almost
identical in design to its predecessor, the
Thunderbolt Express Dock (go.macworld.com/

BELKIN Thunderbolt 2
Express Dock HD

belkin1). Besides upgrading to Thunderbolt 2, Belkin changed the port
configuration. This dock has a front USB 3 port and a headset jack, a
design change from before. The back of the dock has two USB 3 ports
(all of the USB 3 ports can charge a device), Gigabit Ethernet, a head-
phone jack, HDMI, and two Thunderbolt 2 ports.

   If you have an odd-shaped USB flash drive, you might have problems
plugging it into the front USB port. The port itself is recessed a bit from
the outer aluminum casing, which can get in the way if your USB drive
has a built-in connector and a wide case.

   While the Belkin dock is a nice, solid product, it's near the top of the
price range in this roundup, and it doesn't provide anything unique, like
a software utility or different ports.

KANEX Thunderbolt 2
Express Dock

Kanex Thunderbolt 2 Express Dock
The $250 Thunderbolt 2 Express Dock (♦♦♦,
kanex.com/thunderbolt2) also has a brushed
aluminum case. It's almost the same size as
the Elgato dock.

   On the front it has a USB 3 port that can
charge your devices, while the back has two
unpowered USB 3 ports, a headset port, Gigabit
Ethernet, two Thunderbolt 2 ports, and an HDMI connec-
tor. Kanex includes a 1-meter Thunderbolt cable.

   While this is a solid, quality dock, it's similar in design to the
Elgato dock. To me, the Elgato's separate mic and line-out jacks on the
front are preferable to the single rear headset jack on the Kanex.

COMING SOON
There are a couple of docks that haven't been released yet but are
worth investigating. When they are available, we'll review them and

update this roundup.

Henge Docks' Horizontal Docking Station for MacBook Pro (go.macworld.com/hdpro) and MacBook Air (go.macworld.com/hdair) has been on our radar for over two years. The MacBook Pro version finally started shipping this summer, and we're hoping to have a review of it soon.

Sonnet Technologies's $469 Echo 15 Thunderbolt Dock (go.macworld.com/echo15) is made for production environments. It has 15 ports and a DVD burner, and you can also get the Echo 15 with a DVD burner and a 2TB hard drive, or with a Blu-ray drive and 2TB or 4TB hard drive.

BOTTOM LINE
The CalDigit Thunderbolt Station 2 and OWC Thunderbolt 2 Dock stand out in this roundup, but all of the docks are solid choices. The $235 CalDigit dock is a nice combination of price and features and I person-ally like its design. The OWC dock has a lot of ports, but you have to buy a Thunderbolt cable, which pushes it past its $249 price tag. ◼

THUNDERBOLT 2 DOCK SPECS

Dock	Thunder-bolt 2 ports	Front USB 3 ports	Rear USB 3 ports	eSATA	FireWire 800	Gigabit Ethernet	HDMI	Dedicated mic jack	Dedicated headphone jack	Combo headset port	Other
Akitio Thunder2 Dock	2	2 (side)	0	2	1	No	No	No	No	No	
Belkin Thunderbolt 2 Express Dock HD	2	1	2	0	0	Yes	Yes	No	Yes (rear)	Yes (front)	
CalDigit Thunderbolt Station 2	2	1	2	2	0	Yes	Yes	Yes (front)	Yes (front	No	software utility
Elgato Thunderbolt 2 Dock	2	1	2	0	0	Yes	Yes	Yes (front)	Yes (front)	No	software utility
Kanex Thunderbolt 2 Express Dock	2	1	2	0	0	Yes	Yes	No	No	Yes (rear)	
OWC Thunderbolt 2 Dock	2	2 (side)	3	0	1	Yes	Yes	Yes (rear)	Yes (rear)	No	
StarTech Thunderbolt 2 4K docking station	2	1	3	1	0	Yes	Yes	Yes (rear)	Yes (rear)	no	one S/PDIF out port one security lock slot

SPARKLE 1.2.3: MAC-FRIENDLY WEB DESIGN APP NEEDS A BIT MORE LUSTER

BY NATHAN ALDERMAN

IN THE FIELD OF MAC web design programs, River SRL's Sparkle 1.2.3 (go.macworld.com/macapp) lands between Blocs' do-it-for-me ease and Macaw's free-form flexibility. Like a raw gemstone fresh from the mine, Sparkle's still a bit rocky from some angles. But with a few extra facets, it could really shine.

PLENTY OF BRIGHT IDEAS

Unlike its Adobe-influenced rivals, Sparkle sticks squarely with a familiar, Pages-like Mac look and feel. What it lacks in style, Sparkle's interface makes up for in clarity and ease of use.

Like Macaw, Sparkle eschews premade templates. It lets you place text, images, and other page elements wherever you like, aligned with an easily adjusted grid. But Sparkle also offers a library of useful, premade items, including drop-down menus (not yet found in Blocs

SPARKLE
♦♦♦ $\frac{1}{2}$

AT A GLANCE:
Sparkle's another solid entrant in the field of web design programs, with some features its big rivals lack, but it doesn't quite feel complete yet.

PROS:
• Powerful, easy-to-use layout engine
• Ability to add your own web fonts
• Great ideas for supporting responsive design...

CONS:
• ...that don't always work well in practice
• Limited ability to fine-tune styling
• Occasional quirks and glitches

PRICE:
$80

Sparkle.com

35

or Macaw) and a photo gallery viewer. It's easy to populate and style them however you like—although I did notice that when I resized or repositioned a menu, some items would sometimes spontaneously flip from "visible" to "hidden" without any apparent reason.

I found Sparkle's layout engine more powerful and pleasant than Macaw's. I enjoyed its ability to align objects by their midpoints as well as their edges, and to evenly distribute the space between multiple objects. Most importantly, I never felt like I had to fight with it to achieve what I wanted.

I also liked Sparkle's ability to easily add common elements (a top nav bar with a logo and menu, for example) to every page on your site, just by checking a box in its inspector pane. You can even lock elements to the bottom of your page, lest they otherwise appear at the end of one short page, but in the middle of another, longer one.

And after bemoaning the constrained font selection in Blocs and especially Macaw, I frankly could have hugged the folks behind Sparkle when I discovered its ability to incorporate third-party web fonts.

True, the implementation's a bit kludgy. To enjoy full font support on every browser, you have to browse for and add three or four different types of files for each font. It's not always clear when you've successfully done so, since the filenames stick around in their respective fields even
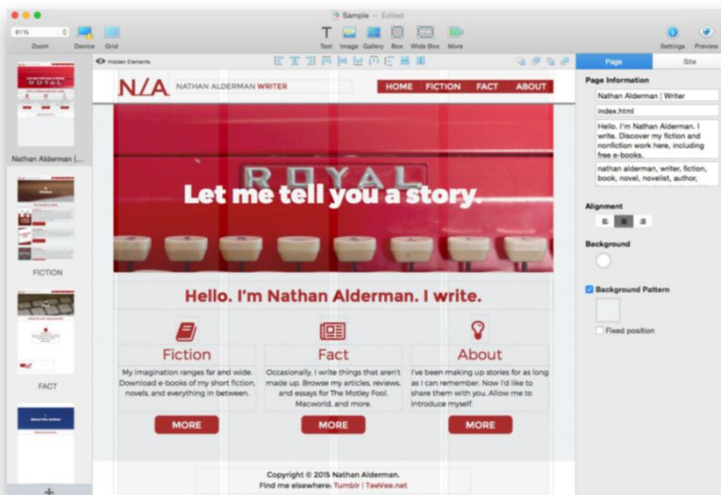
IF YOU'VE USED Pages, you'll feel right at home with Sparkle's Mac-friendly interface.
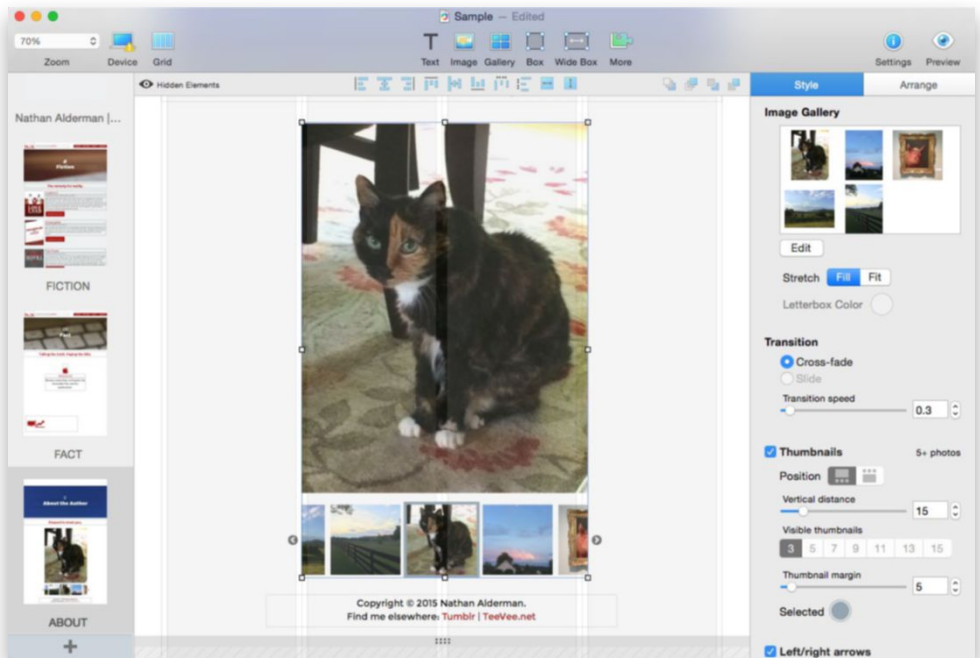
after you've added the font in question. I also couldn't install one or two of a trial batch of open-source, web-ready sample fonts, and Sparkle didn't explain what might have been wrong with those files.

Still, I loved that Sparkle had this feature at all. And its ability to add any web font from Google's hundreds-strong library won further points with me, even if the interface—mixing those fonts in with whatever system fonts you already have installed, which makes them tougher to find—could use a little work. (Search features help narrow down your font options, provided you know what you're looking for. And once you've found your dream font from that roster, adding it is as easy as checking a box.)

Sparkle's live preview feature worked well, instantly applying changes made within the program to the page as rendered in my browser. It'll open your page in Safari, Firefox, or Chrome automatically if you have those browsers installed, and give you a local address to preview your work on any device connected to your network.

One section of Sparkle's online help guide remained unfinished as of

SPARKLE'S READY-MADE photo galleries, drop-down menus, and other items are easy to customize and style.

my testing, but I found the rest clear and well-written. It helped me get up to speed with the program quickly, and left me with very few questions.

A FEW LACKLUSTER FLAWS

Sparkle gets so many things right that I found its stumbles surprising. Compared to Macaw and even Blocs, it either lacks or limits your ability to adjust some incredibly basic CSS styles. You won't find any controls for padding, for instance, and you can only apply and adjust borders on every side of an object, instead of specifying thicknesses or colors on individual sides.

While you can customize text styles for preexisting tags, or create your own (a definite plus), you can't create classes for buttons or other elements. Even its text styles don't include background colors, borders, or text shadows, and there's no way to edit active, hover, or focus states for anything but buttons or pull-down menus. Like Macaw and Blocs, Sparkle doesn't yet support rudimentary HTML elements like bullet-pointed lists or tables, and there's no built-in support for adding your own jQuery or other custom scripting.

Sparkle's implementation of responsive design—making sure sites adjust to look good on any size screen—seems inspired at first, but

UNLIKE ITS RIVALS, Sparkle offers a huge variety of Google-made web fonts, and lets you add others you've downloaded.
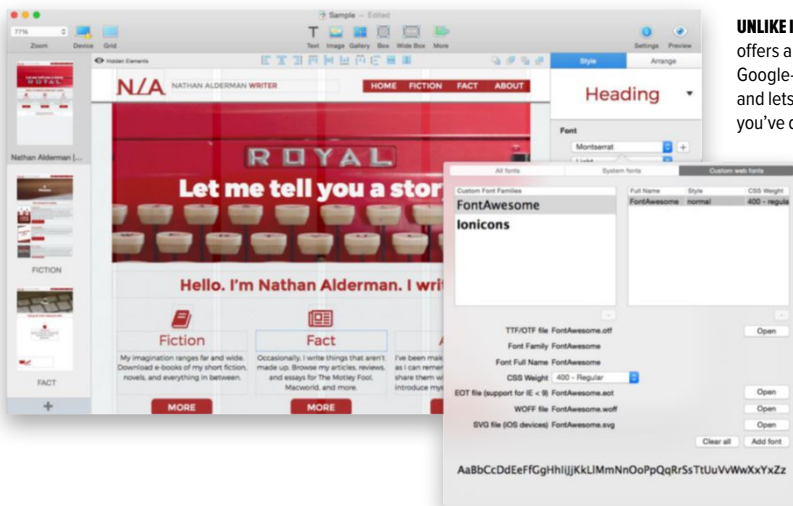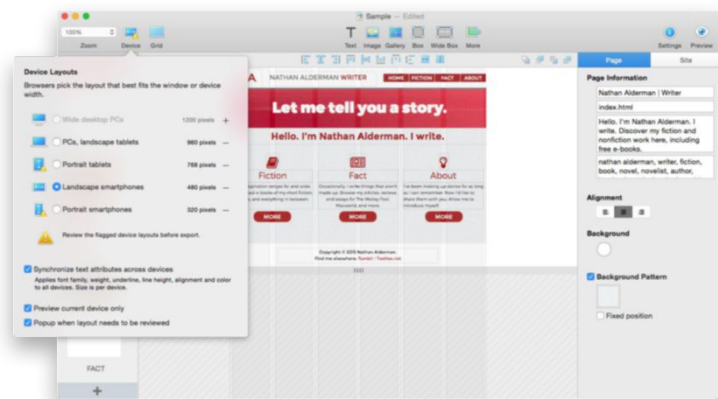
quickly starts feeling half-baked.

Unlike Macaw, which lets you specify precise pixel breakpoints, Sparkle offers five convenient preset sizes: widescreen, PC, vertical tablet, and horizontal and vertical phone. You can enable or disable any of those views, and once you've established a basic design in one view, Sparkle will do its best to scale it up or down for others. That's considerate in theory, but leads to incredibly tiny text in practice.

When I started moving elements around at smaller sizes to create a more reader-friendly layout, I often found my original, larger-size designs changed in strange ways, especially when working with objects I'd pinned to every page. Elements would move to places I hadn't put them, get grouped in ways I hadn't intended, or just vanish entirely. Sparkle's smart enough to warn you when a change made at one size might affect other views, but I wish it would help you avoid those problems altogether.

I found only a few glitches with the program itself during my testing, none serious. Occasionally, background images would become garbled, and the menu to pick and add fonts sometimes slowed down for a few seconds. Beyond that, I can't quibble with the quality of Sparkle's coding.

BOTTOM LINE

Like Macaw, Sparkle ultimately feels somewhat unfinished. I expect that future versions will add to its already promising roster of features, but the current version lacks the polish that would make it a real jewel. ∎

MACUSER REVIEWS
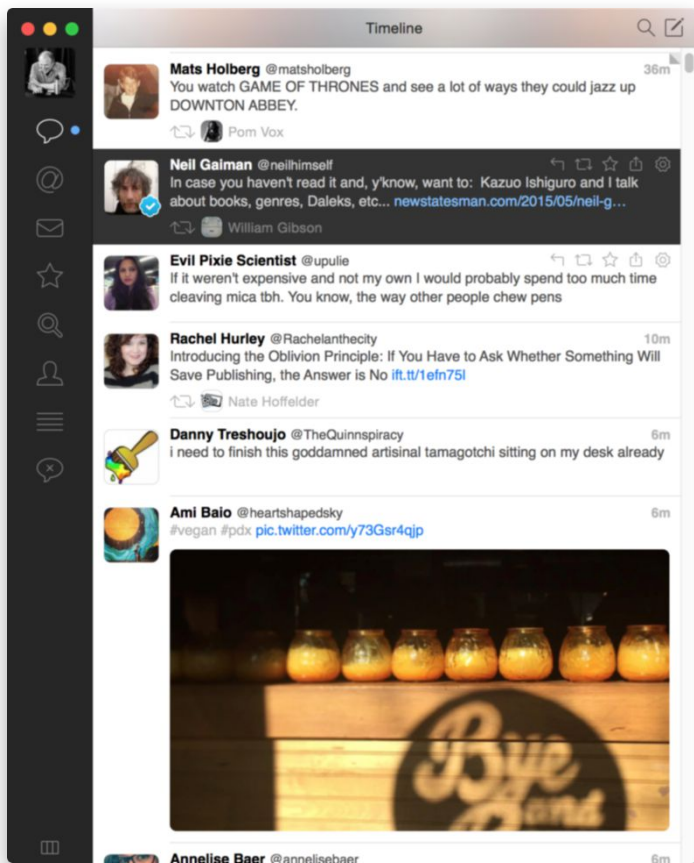
THE MAIN TIMELINE view in Tweetbot 2 provides basic information about each tweet, with icons allowing replies, retweets, and more.

SOCIAL NETWORKING

TWEETBOT 2 REVIEW: TWITTER MAC APP HAS A CRISPER DESIGN BUT IS A WORK IN PROGRESS

BY GLENN FLEISHMAN

TWEEBOT 2 (MAC)

⭐⭐⭐½

AT A GLANCE:

Twitter client sports a new design but the Mac app still needs some polish.

PROS:

- Crisper design in keeping with newer versions of OS X
- Summary of recent photos in user profiles
- Harmonized interface with iOS version
- Better handling of multipane mode

CONS:

- Cannot play animated GIFs and videos within the app
- Image window pop-up cannot be resized
- Some minor interface glitches

PRICE:

$13

tapbots.com

WHEN A SERVICE YOU USE has its own free software, why turn to a third party for an alternative? The folks at Tapbots continue to answer that question with each update to their Tweetbot client for Twitter, available both in iOS and OS X. Tweetbot provides a straightforward timeline view, threaded conversations appear with a double-click, and there's no need to buy into each of Twitter's sometimes dubious and sometimes useful innovations.

The latest OS X release, Tweetbot 2 (tapbots.com/tweetbot/mac), is a welcome update with a more appealing design, but it still has some room to grow to feel polished and fully up to date. Given Tapbots' ongoing development on both platforms, it's easy to see where things are going, but they can't get full marks for this version without further revisions.

I've been a longtime Tweetbot user, though I've tried other third-party clients for Mac and iOS before and after Twitter's policy change made it infeasible for developers without established user bases to create a business on new ones. I've stuck with it because I live in its timeline view and prefer to see single messages that I can drill down for conversations. Others may like Twitter's native client or other apps that show threads in the Home or timeline view.

Those who, like me, use the iOS version will find the new OS X release has become a close replica, which is nice when moving between platforms: everything is in the same place. But one could call version 2 mostly a design and maintenance release, even though a lot of work clearly took place behind the scenes. Existing owners pay nothing for the upgrade; new buyers will be happy with a reduced $13 price tag (down from $20 for version 1). (One could argue that version 1 owners in effect paid $7 for the upgrade.)

Tweetbot divides Twitter in several categories more cleanly than Twitter itself now does in its own apps and on its website. Your timeline, mentions, direct messages, and items you've faved each have their own tab. Search, user profile, lists, and mutes do as well. Double-click a tweet to see it in isolation with stats like faves and retweets, as well as in context if it's part of a discussion. (Replies in Twitter software that handles them correctly links multiple tweets in a series.)

An avatar appears at the top for the current selected account, and multiple accounts can be added. Each account has its own preferences set for notifications, as well as which external services are tied in for "read it later," URL shortening, image uploads, video uploads, and syncing your reading point in your timeline.

TWEETBOT'S NEW TWEET window allows composition, including media, and revealing location.

Tweetbot supports multiple columns, each of which can follow a separate stream, yet I've never found its approach particularly effective; most people I know who need multiple streams use (and swear at) Tweetdeck, owned by Twitter.

In version 2, the user interface has been updated to the Yosemite (and now El Capitan) feel. Every element is crisper, and works better with Retina displays. I do find the controls in each message for reply, retweet, fav, share, and miscellaneous to be a bit too small in this release. And when a tweet is faved, its star overlaps the time stamp showing how long ago the tweet was made.

In this update, you can opt to show a verified account blue checkbox directly on avatars, which themselves can be shown framed as squares or circles. Twitter has its own logic about which accounts receive verification (mostly athletes, celebrities, and journalists, including the Macworld staff), but it can be useful in following news to know at a glance whether or not someone's identity has been double-checked.

Retweets now show a shrunken avatar of the person sharing the message, which can again help in deciding whether or not to pay attention to it or follow links.

Embedded tweets are a new sort of retweet in which a referenced tweet appears nested in the message that mentions it, as if it were an image. Tapbots added this first to Tweetbot 5 for iOS, and then in version 2.0.1 of Tweetbot for OS X. (Update: Tweetbot originally planned to add this in a 2.1 update, but instead included it with 2.0.1, which shipped the day of this review, after it had been originally published.)

Numerous small problems in this release need to be fixed for consistency, usability, and aesthetics. When clicking to view an image, a

window appears that's better formatted and has more options in its Share menu than Tweetbot 1, but it also cannot be resized. Tweets with multiple images allow no way to show all images without clicking them one at a time. Tweetbot still doesn't support viewing videos or animated GIFs inline or through an in-app pop-up window, and instead opens a browser window.

While you can easily opt to not include your current location, in the previous release this was signaled by a grayed-out Apple-style location
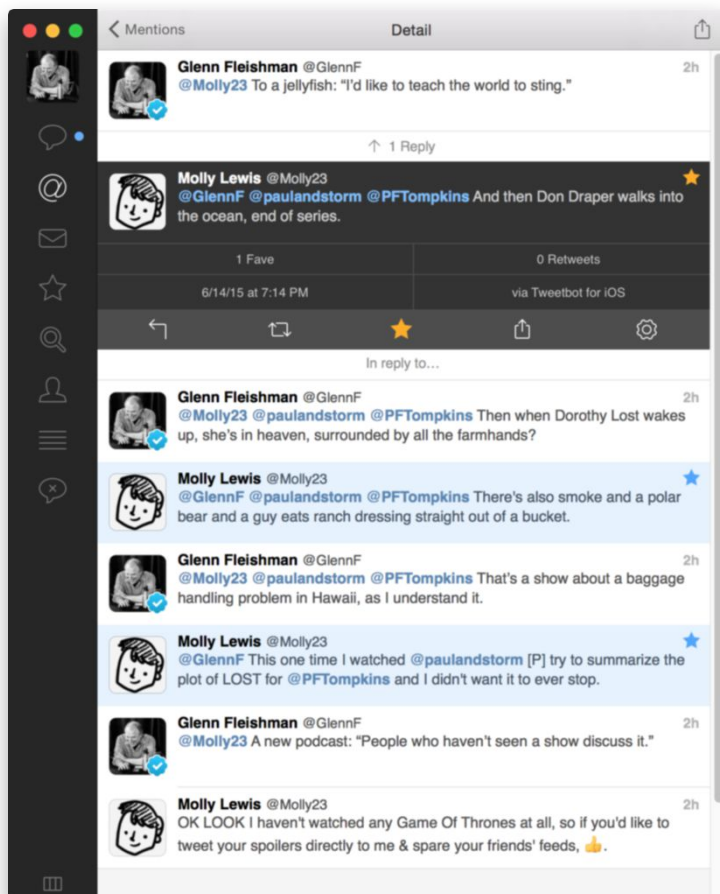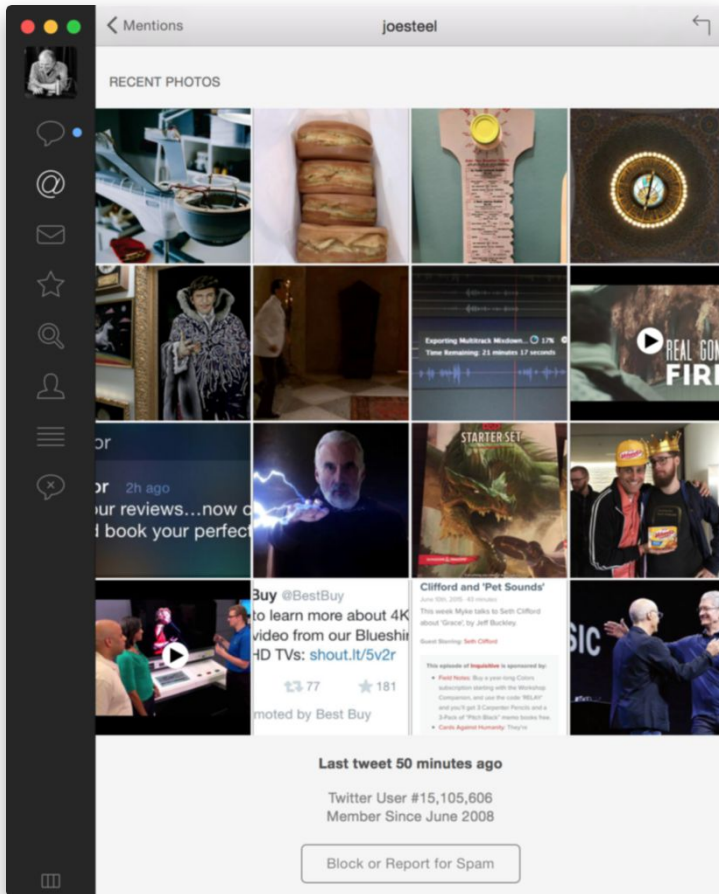
icon in a new tweet dialog. In this release, that icon is accompanied by a large lozenge that reads Location Disabled, which seems like too much negative information—how often do we need to be told that strongly what we're not doing?

Every view in Tweetbot allows searching within downloaded tweets in addition to a Twitter search tab, but there's a problem with focus: after entering a search term in version 1, you could press Escape to clear it and show all messages in the view. In version 2, the focus leaves the

field, requiring a click and then Escape.

There's a lot to like, though. In the previous version if you were composing a tweet and wanted to navigate through other parts of the timeline or other tabs, you had to first drag the fresh tweet to disconnect it. Now, all new tweets are freestanding, which is a nice improvement.

New tweets can have images and video added through the gear menu's Add Image and Add Video items, but you can also drag them in. Handy in connection with the new Photos app, which is more painful to export and drag images out than iPhoto, is this sequence: select an image in Photos, choose Edit ➜ Copy, and then in a new tweet window simply paste to queue it to upload with the tweet.

TWEETBOT STILL DOESN'T SUPPORT VIEWING VIDEOS OR ANIMATED GIFS INLINE OR THROUGH AN IN-APP POP-UP WINDOW, AND INSTEAD OPENS A BROWSER WINDOW.

I've been partial to Tweetbot's mute options, which are separate from the global mute feature that's part of Twitter's main settings. (There's no interface for those mutes within Tweetbot.) You can mute by hashtags, keywords, or accounts, and set expirations from 1 day to Forever. These mute lists sync across all of your copies of Tweetbot in iOS and OS X. If someone (such as me) is being a blowhard and you want to suppress them for a day, or you never want to see the result of anyone's Nike fitness devices, it's a few clicks to tone down your timeline. Tweetbot 2 has improved the look of this view, adding avatars to muted accounts.

Twitter continues to roll out features and third-party developers aren't always granted access right away through the service's API (application programmers interface). Group direct messages (DMs) aren't available outside of Twitter apps and its website yet. Longer DMs—up to 10,000 characters—have been announced by Twitter, but not yet released; Tweetbot has already been modified to support them, however.

BOTTOM LINE

This review may sound generally negative, but this release is an improvement on the whole, and retains all of Tweetbot's delight and simplicity of use. Tapbots needs to polish an update to push this version further forward. ∎

Hot Stuff
What We're Raving About This Month

OWC USB-C DOCK

The $129 USB-C Dock (macsales.com) has 11—count 'em!—ports: four old-school USB ports, one USB-C port, an SD card reader, an HDMI with 4K display support, Gigabit Ethernet, audio-in and -out ports, and a connection for your new 2015 MacBook. Plus, it comes in color schemes that precisely match your MacBook: Gold, silver, and space gray. The device is currently available for preorder; it ships in October.—**JOEL MATHIS**

DXO ONE

The $599 DxO One (dxo.com) combines the convenience of shooting photos with your iPhone with the image quality and RAW formats of a DSLR into one killer device. This compact camera attaches to your iPhone's or iPad's Lightning connector, so you've got an external lens, a real shutter button, and even space for a microSD card. You'll compose shots and tweak settings on the iPhone's nice large screen. The aluminum device is only 2.65 inches tall and weighs just 3.8 ounces, and its lens is a f/1.8, 32mm equivalent aspherical lens with a variable 6-blade iris and a 1-inch, 20.2MP CMOS BSI sensor—which means it's great for low-light images. Even attached to an iOS device, the camera can still pivot as much as 60 degrees up or down. And yes, you can also face the camera toward you for selfies.—**SUSIE OCHS**

Hot Stuff
What We're
Raving About
This Month

JABRA SPORT COACH

Jabra's $149 Sport Coach (jabra.com) earbuds are a bit different from your usual set of earbuds. Yes, it delivers music—it features Dolby Sound Enhancement to give your tunes the crystal clear hearing they deserve—but it also features a motion sensor that measures distance, pace, steps, cadence, and calories burned. All of this info is delivered to you via Jabra's corresponding cross-training app, where you can turn on its optional audio coaching guide. It's kind of like an Apple Watch for your ears! Plus, these Bluetooth-powered wireless sports earbuds are sweat and weather proof.—JOEL MATHIS

You might know **Joshua**. He loves video games, and he owns enough to know they're not all meant for kids. That's why he reminds his friends (at least the ones that have kids) that they all have **big black letters on the box** to help parents find the ones that are best for their families.

You can learn about those ratings at **ESRB.org**

Los Angeles, CA

ESRB
ENTERTAINMENT SOFTWARE
RATING BOARD

5 podcatcher apps to replace nearly dead Instacast

A once-popular iOS podcast client is going away. We round up alternatives, including Overcast, Downcast, Castro, Pocket Casts, and Apple's own Podcasts app.

n some ways, Instacast doomed itself. One of the first podcast clients on the iPhone, the pioneering player helped propel the medium from its humble roots into a global phenomenon spanning the gamut of genres and subjects.

But with the podcast app's popularity came a catch—along with a hoard of new users, a slew of competing players popped up too, all vying to chip away at Instacast's sizable audience. Over the course of its lengthy version history, it went from paid to free with in-app purchases and even offered two levels of subscription memberships, but modern clients kept the pressure on until the company announced recently that it had run out of money and was shutting down for good.

Consequently, Instacast leaves loads of good options in its wake. Like Twitter clients or weather apps, podcatchers all pretty much do the same thing—organize and play your favorite shows—so the user experience sets the tone. Instacast 5 was no slouch in that department, with a gorgeous, intuitive interface, offline playback, full-text search, and dynamic playlists, but even if you've been a fan since version 1, there are plenty of worthy replacements in the App Store. Here are five of the best:

OVERCAST

Overcast (go.macworld.com/overcast;
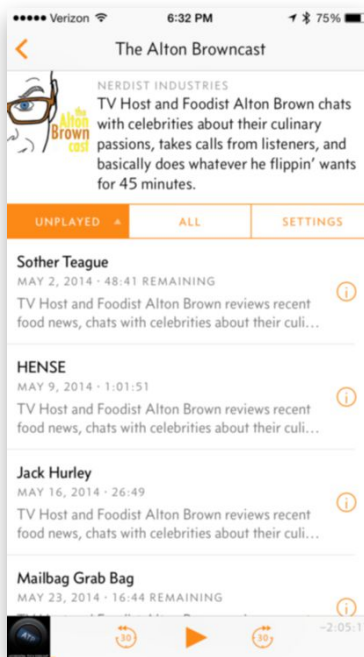
free, with $5 in-app purchase) was built for the best possible reason: Its developer, Instapaper creator Marco Arment, couldn't find a client that fit his specific needs. Impeccably crafted and thoughtfully designed, Overcast's interface makes searching and listening to podcasts an absolute pleasure. It's not just the easy

navigation and big, bold controls; Overcast has an attention to detail unlike any other podcast app.

Poke around the settings and you'll find handy toggles for cellular syncing, seek acceleration, and rotation lock, as well as customizable forward and rewind buttons and advanced remote controls. Playing podcasts is smooth and seamless, with two awesome unlockable features: Smart Speed, which hastens the duration of podcasts not by speeding up the speech but by eliminating the spaces between words, and Voice Boost, which dynamically raises and lowers the volume of speech to homogenize the listening experience.

Additionally, a free web component lets you pick up your listening on your Mac, and you can even import whatever subscriptions you have sitting in Instacast, but there is one major caveat: You can't stream. Podcasts have to be downloaded before they can be played, so you'll want to remember to stock up before you head out on the road. Also, there's no support for chapters, a long-standing feature in Instacast.
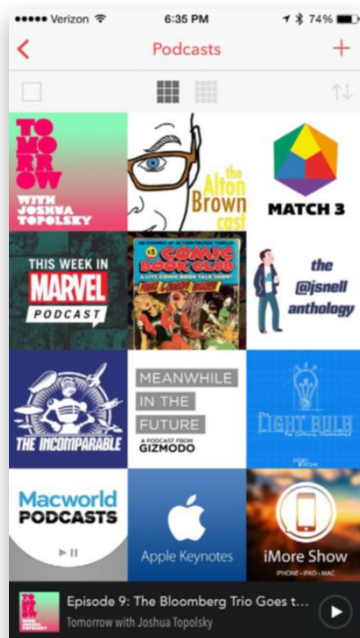
POCKET CASTS

Martin Hering, founder of Instacast's parent company Vemedio, suggested Instacast's users navigate over to Pocket Casts (go.macworld.com/ pocketcasts; $4) since it "looks better (than Overcast) and has chapters," and it's hard to argue with his recommendation.

From a distance, in fact, Overcast and Pocket Casts sport kindred interfaces, with a similar use of fonts, menus, and animations. While the subscription screens are quite different—Pocket Casts uses a rearrangeable mosaic of squares—the two apps share many of the same visual cues, but when it comes to the experience as a whole, plenty sets the two apart.

The main screen does a great job of showing what's been downloaded

JUST THINK OF POCKET CASTS' subscription squares as a sliding puzzle game that will never end.

and played, and a set of customiz-
able filters let you easily apply your
own parameters. The Discovery
section has a familiar App Store feel,
which makes finding new podcasts a
snap. It also mirrors Instacast's
support for streaming and video
podcasts, but while it does have a
web component, it'll cost you an
extra $9 to use it.

Pocket Casts doesn't offer any
special playback features, though it
will let you speed up the voice and
quickly scrub through streams. And
one annoyance is the lack of an easy
way to continuously play a series of
episodes other than creating a
manual playlist.

DOWNCAST

Compared to the other apps here,
Downcast (go.macworld.com/
downcast; $3) takes a decidedly
utilitarian approach to podcatching.
You won't find much glitz or gloss in
the interface, but what it lacks in
vibrancy it makes up for with features
and playback.

The app's main screen includes a
simple list of any unplayed episodes,
but don't be fooled by its sparse-
ness—Downcast is easily the most
advanced client in this list, so users
who prefer power and personaliza-
tion over prettiness would be well-
served by checking it out. The main
settings include a wealth of options,

from continuous play to scheduled
feed refreshes. You can also dial
down into little details like the startup
view, sounds and notifications, and
toggle settings for skipping, backups,
and priority playback. It offers far
more than most users will ever
need—up to and including the ability
to customize the name of a particu-
larly unwieldy podcast in your
playlist—but it's refreshing to see a
podcast client focus so much of its
attention on features.

The player, which supports video
podcasts and streaming, is equally
feature-laden (albeit a tad cluttered),

offering separate buttons for skipping tracks or intervals, continuous play-back, speed, timer, AirPlay, and casting. You can increase the speed all the way to 3X, which will get you through an hour-long episode ridiculously fast, but you might not understand much of what the hosts are saying.
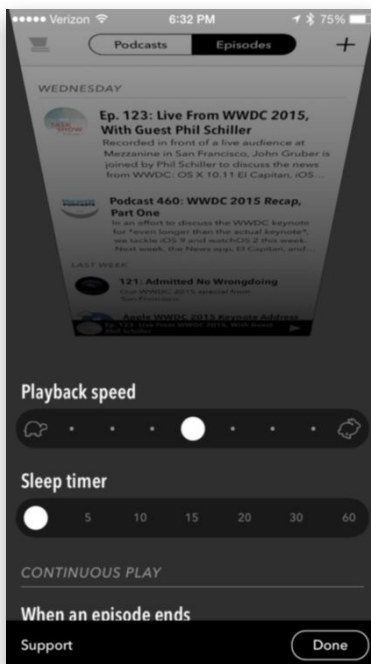
CASTRO

Instacast users looking to break free from the traditional podcatcher need look no further than Castro (go. macworld.com/castro; $4). With a playful, gesture-heavy interface that offers just enough features to be taken seriously, Castro might take some getting used to—certainly more so than the other options here—but it also might become your new favorite way to listen.

Castro's unique spin boils down podcasting to its two basic functions: playing and searching. It separates your subscriptions by title and episode, with large circular icons that help quickly navigate lengthy lists. Settings are hidden behind the main window (literally) and include a fairly customary set of options for speed, sleep timer, continuous play, sorting, and sounds. Plus, the app has some nice data usage and storage prefer-ences—particularly useful for habitual downloaders is the ability to limit the episode cache size.

Video podcasts are unfortunately

not supported here, but the audio player is a wonderful expertise in minimalism, contained to the bottom bar and featuring one of the coolest scrubbers I've ever seen. Its weak-est aspect is discovery—adding podcasts is entirely search-based, so you're unlikely to stumble across something you haven't heard before—and there's no iPad com-panion app or web component. But Castro is still a charming, elegant client that definitely stands out among its peers.


NORMALLY WE DON'T SHOW OFF settings screens, but Castro's is one of the coolest around.

PODCASTS

The best things about Apple's Podcasts (go.macworld.com/podcasts) app are that it's free and it's likely already on your iPhone. It might lack some of the polish and features of the other apps on this list, but if it's too soon to commit to a relationship with a new podcast client, it'll get you through the tough transition.

If you haven't used Podcasts since its skeuomorphic reel-to-reel days, you'll be pleasantly surprised by how much it's improved. Gone are the bugs and crashes, and overall it does an excellent job of sorting through your recent and unplayed episodes, though its interface is still somewhat scattered with a distinct lack of intuitiveness. For example, there are no global settings. Setting the play order, refresh rate, and episode limits are all done on a per-podcast basis, which can quickly get tedious.

Video podcasts and streaming are supported, and Apple does a great job curating its store, mimicking the top lists and featured sections found in the App Store (though any podcast you're looking for obviously needs to be available through iTunes). You can speed up audio and set a sleep timer as you'd expect, but Podcasts does have one main advantage: You can summon Siri to play the latest episode of any of your subscribed feeds.
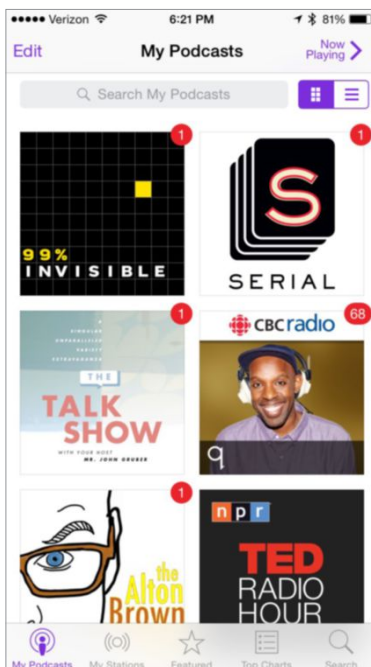
BOTTOM LINE

This list is by no means definitive, and fans of Stitcher, PodWrangler, and iCatcher will surely take umbrage with it. Truth be told, Instacast users really can't go wrong with any of options here (even Apple's Podcasts app will fit the bill for some). Overcast edges out the others, but only if you don't mind having to download every episode. If streaming's your thing, go for Pocket Casts. If you want to fiddle with a lot of features, try Downcast. ∎

7 ways to curb your iPhone's cellular data use

How to put a lid on your iPhone's cellular data use, and avoid nasty surprises on your wireless bill.

BY BEN PATTERSON

Sure, four (or six, eight, or more) gigabytes of cellular data probably sounded like a lot when you first signed up for your iPhone data plan. But thanks to the latest data-hungry iOS apps and features, a gigabyte of mobile data isn't what it used to be.

Indeed, you'd be amazed how quickly your iPhone (or your LTE-enabled iPad, for that matter) can gobble up mobile data—particularly if you're, say, watching HD-quality Netflix videos, streaming iTunes Match songs, using your iPhone's personal hotspot with your laptop, or letting iOS update your apps automatically. Read on for 7 ways to put a lid on your iPhone's cellular data use, starting with...

STOP AUTOMATIC DOWNLOADS FROM USING CELLULAR DATA

With the right settings enabled, iOS will automatically download any new music, apps, or iBooks purchased by any of your iCloud-connected devices. Even better, your iPhone can automatically download and install updates for all your iOS apps.

While certainly convenient, automatic downloads can put a serious dent in your monthly cellular data allowance, especially if you have a lot of iOS apps installed.

Luckily, you can flip a switch to block cellular access to automatic

YOU CAN STOP iOS's automatic downloads feature from draining your monthly data allowance by blocking its access to cellular data.

downloads, and doing so also turns off the spigot for two other data-hogging features: iTunes Radio and iTunes Match.

Just tap Settings, iTunes & App Store, then flip off the Use Cellular Data switch.

The only downside is that you can't pick and choose which automatic download features can use cellular data; instead, it's an all-or-nothing deal. In other words, if you don't let your iPhone download app updates over cellular, you won't be able to stream iTunes Match tracks on your mobile network, either.

KEEP FACETIME CALLS SHORT AND SWEET

FaceTime makes for a great way to keep in touch with far-flung family and friends, as well as a surprisingly

THERE'S AN EASY way to shut off FaceTime's cellular access completely.

easy way to drain your monthly cellular data allowance.

You've got a couple of options when it comes to limiting FaceTime's cellular use: either exercise a little self-discipline when it comes to non-Wi-Fi video calls, or shut off FaceTime's cellular access completely.

If you picked option number two, tap Settings and then Cellular, and scroll down to the FaceTime setting (under the Use Cellular Data For heading) and flick the Off switch.

Bonus tip: You can turn off cellular access for any of your apps, not just FaceTime, from the Cellular settings screen.

EASY DOES IT WITH NETFLIX AND YOUTUBE

Whether you're stuck at an airport or cooling your heels in a hotel room, watching a movie on Netflix over your iPhone's speedy LTE connection can be a tempting diversion.

But think twice before binge-watching an entire season of *House of Cards* over LTE. Netflix (or another video-streaming service, for that matter) can easily chomp a gig or more of data an hour for HD-quality video. Indeed, a couple of HD Netflix movies could blow through an entire month of cellular data.

So take it easy when it comes to streaming Netflix, YouTube, or other videos over cellular. Remember, even just a few minutes each day can add up.

If you simply can't live without Netflix while you're on the road, try dialing down your Netflix video quality to save bandwidth. Open your

58

Netflix account in a desktop browser, visit the Your Account screen, click the Playback Settings screen, and then pick an option: Low (think sub-DVD quality, but only a third of a gigabyte of data use per hour), Medium (0.7GB an hour for SD-quality video), or High (3GB an hour or more for HD-plus quality).

TURN OFF AUTO-PLAYING VIDEOS ON FACEBOOK

A recent update of Facebook's iOS app added an eye-popping new feature: auto-play videos, which start playing automatically as you scroll through your news feed.

It's a nifty feature, and the default Smart Auto-Play setting supposedly adjusts your auto-play video quality depending on your battery life and whether you're on a cellular network. Still, all those auto-playing videos can add up when it comes to cellular data.

If you'd rather turn off auto-play Facebook videos, try this: Open the Facebook app on your iPhone, tap the More button in the bottom right corner of the screen, scroll down and tap Account Settings, then tap Videos, Auto-play. Flick off the Smart Auto-Play switch, then pick a new setting—ideally, either Use Wi-Fi Only or Never Play Videos Automatically.

USE A BROWSER WITH A MOBILE-FRIENDLY MODE

A little casual web browsing over your iPhone's LTE connection probably won't drain your monthly data allowance on its own. Again, though,

FRUGAL iPHONE USERS should consider using a bandwidth-conscious mobile browser—one that "crunches" webpages into smaller, more digestible chunks of data.
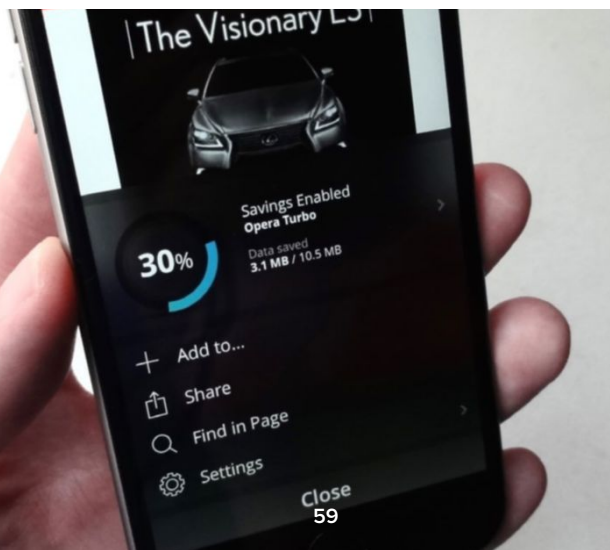
it all adds up.

That's why frugal iPhone users would be well served with a bandwidth-conscious mobile browser—specifically, one that "crunches" web pages into smaller chunks that consume less cellular data.

Among the options: Opera Mini (go.macworld.com/opera), a free browser that shaves hefty chunks of data from web pages, and Google Chrome (go.macworld.com/chromemobile), which crunches web pages with its Google-hosted Data Saver feature (tap the menu button in the top corner of the screen, then tap Settings, Bandwidth, Data Saver).

SET YOUR PODCATCHER TO ONLY USE WI-FI

Not that long ago, my wife and I had a brief but annoying cable Internet

GOOGLE CHROME CRUNCHES WEB PAGES WITH ITS GOOGLE HOSTED DATA SAVER FEATURE

outage at our house, meaning (horror of horrors!) we had to rough it with LTE for a few days. Oh well, I thought; we're grown-ups, and we can live without Netflix for 48 hours, right?

So imagine my surprise when a rare text alert from my carrier landed on my phone a day or so later: somehow, we'd used more than 90 percent of our cellular data for the month. What happened?

Well, turns out the podcast apps on our iPhones hadn't gotten the memo about being careful with bandwidth, and they dutifully down-

MAKE SURE YOUR podcast manager of choice only downloads new podcasts over Wi-Fi, not cellular.
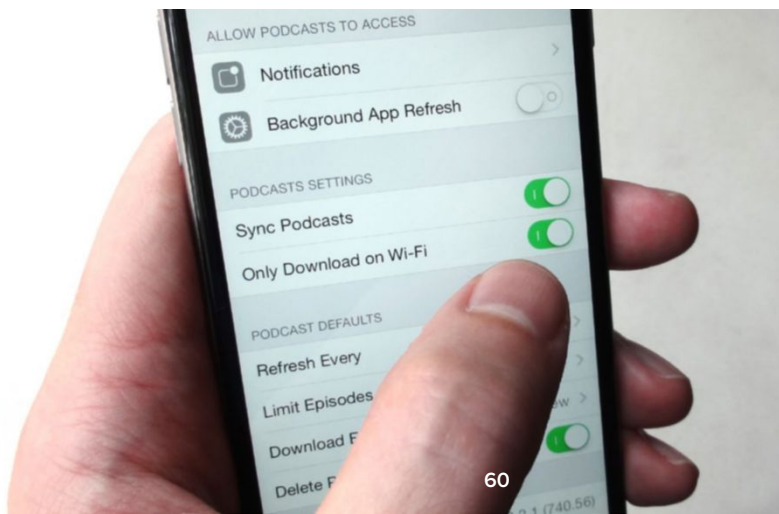
loaded a fistful of new podcasts—yes, including several lengthy video episodes. Oops.

Moral of the story: Make sure your podcast manager of choice only downloads new podcasts over Wi-Fi, not cellular.

For the iOS Podcasts app, tap Settings, scroll down to Podcasts, then flip on the Only Download On Wi-Fi setting.

Don't see a similar setting for your favorite podcast app? You can always block its cellular access. Tap Settings, tap Cellular, find your podcast app in the big list of apps, and flip off its cellular switch.

CAREFUL WHEN USING A PERSONAL HOTSPOT

Turning your iPhone into a portable hotspot makes for a great way to keep your laptop connected while you're on the go—and it's also a recipe for a jumbo-size wireless bill.

Unless you tell your desktop or notebook PC otherwise, it'll assume it's using a no-limit Internet connection, leaving it free to download massive system and app updates, grab file attachments from your email provider, sync your Dropbox and Google Drive folders, and perform any number of data-hogging activities.

The good news is that newer iMacs and MacBooks will automatically cool it when it comes to giant system updates over your iPhone's mobile hotspot. Similarly, if you're using Windows 8 or better, you can designate your Personal Hotspot as a "metered connection"; just open the Settings panel on the right side of the screen, click the Network icon, right-click the name of your

IF USED UNWISELY, your iPhone's Personal Hotspot feature could lead to a surprisingly large wireless bill.

mobile hotspot, and select Set As Metered Connection.

That said, even the "metered connection" flag won't stop your laptop from syncing, say, those massive video files in your Dropbox, or pinging Outlook for new messages and attachments every five minutes.

Make sure to pause any file-syncing apps on your desktop before you connect using your iOS Personal Hotspot, and consider using a web client for checking email. Users of iTunes on the desktop should look out for automatic podcast, music, and video downloads. And yes—previous warnings about Neflix, YouTube, and other video-streaming services still apply.

You can use the Activity Monitor app on your Mac to keep an eye on your data usage—just make sure the Network tab is selected. On a Windows 8 or better PC, you can check your bandwidth by right-clicking your data connection and selecting Show Estimated Data Usage. ■

How Square aims to bring Apple Pay into mom-and-pop shops

Square could take Apple Pay mainstream by putting its new NFC reader in the small businesses you shop at most.

BY CAITLIN McGARRY & LEAH YAMSHON

Y ou can use Apple Pay at more than 700,000 retail locations across the United States, but good luck trying to pay with your phone at your neighborhood coffee shop or favorite food truck. While national chains and big-box stores are working to upgrade their systems to accept contactless payments and chip cards, small businesses have been slower to join the mobile payment party.

When Cupertino took the wraps off Apple Pay last fall, some predicted that Apple would crush smaller mobile payment companies like Square. Now it's clear that Apple needs Square to reach the millions of independent shops that otherwise would sit out the switch to mobile payments. Square's new Apple Pay reader (squareup.com/emv-reader) will do with contactless payments what its original reader did with traditional credit and debit cards: make it easy and cheap for small businesses to accept any way you want to pay and kill the phrase "cash only."

HOW IT WORKS
Square partnered with popular San Francisco-based coffee chain Blue Bottle to test out the new reader in the days following its unveiling at Apple's Worldwide Developers Conference, so we ventured down to the coffee shop's Market Square location to see if it's as easy to use Apple Pay with Square as it is in other settings.

The verdict: It's a cinch to use, because the new reader works just as seamlessly as standard NFC terminals. When the sales associate is finished ringing you up, a green

> **IT'S CLEAR THAT APPLE NEEDS SQUARE TO REACH THE MILLIONS OF INDEPENDENT SHOPS THAT DON'T USE MOBILE PAYMENTS.**

light will flash on the reader, which indicates that it's ready to accept your payment. You'll then just tap your Apple Watch or iPhone on the coaster-shaped reader, and you're all set.

The one caveat with this reader is its nondescript look: It's a small, flat, white box that isn't actually attached to the iPad-based Square register system. It's very convenient for shop owners who already use Square's registers, because they don't have to replace their whole register system,

but it might not be the most intuitive for customers. The one at Blue Bottle was mounted to the counter, and you probably won't notice it unless you're looking to use Apple Pay.

The Blue Bottle baristas mentioned that they've seen a lot of interest from iPhone users, and once they point it out their customers have no trouble checking out. During our test, we saw at least five people purchase coffee with Apple Pay over the course of an hour, and none of them had to ask where the reader was. A Square spokesperson said it's up to the individual store to let customers know what their payment options are.

And while Square pegged its new reader to Apple Pay, the reader also supports contactless payments from Android devices equipped with NFC and accepts physical chip cards.

MAKING APPLE PAY ROUTINE

While Apple is clearly an expert at building devices that solve problems, wading into payments hardware probably isn't at the top of its to-do list. So partnering with Square is beneficial for both companies: Apple gains a foothold with small businesses that wouldn't have transitioned to mobile payments otherwise, and Square gets a high-profile launch of a product it was gearing up to release anyway.

Businesses need to support EMV chip cards by October 1, otherwise liability for card fraud shifts onto them. Square wanted to offer those businesses a solution as simple as its original reader, which plugs right into an iOS device's headphone jack. The new reader accepts both chip cards and NFC payments, and connects wirelessly to an iPhone, iPad, or Square Stand, taking up much less

USING SQUARE'S NEW reader is super simple, but it's almost too discreet.

counter space than traditional payment terminals. It's also only $49, with a $49 card processing credit. The first 250,000 businesses to preorder get the new reader for free when it ships this fall.

It's unclear just how many of Square's millions of business customers (as specific a figure as the company will share) will upgrade to the new reader, but Square hardware chief Jesse Dorogusker told Macworld that many will be spurred to quickly adopt NFC and EMV because of customer demand.

"Buyers will slowly and then suddenly insist on paying with these new technologies," he said. "I never want a business owner looking across the counter at the buyer and saying, 'I'm sorry, we don't accept that.'"

Americans are getting fed up with card fraud—it seems like every month another retailer is hacked or your card data is skimmed. Apple Pay and chip cards go a long way toward preventing fraud with enhanced security.

Apple is still waiting for a majority of the nation's 100 largest retail chains to get on board with Apple Pay, but if the small stores people frequent throughout the week start accepting contactless payments, it will establish an expectation that other merchants will need to meet.

"People don't shop at big-box retailers every day," Dorogusker said. "It's the stores you shop at every day that create habits. Ironically, these are the businesses that get left out of these transitions." ■

FOR $49, SQUARE'S customers can upgrade to a new NFC reader that also supports chip cards.

NOVELS ROCK 'N' ROLL STAND-UP COMEDY JAZZ VIDEO GAMES MOVIES COMIC BOOKS TALK RADIO

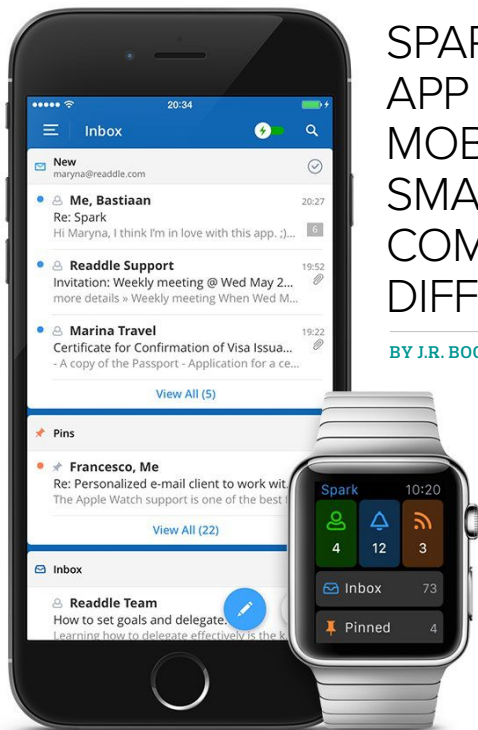## EVERY NEW ART FORM HAS ITS FIGHT FOR FREE SPEECH.

OUR TIME IS NOW
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Reviews

SPARK: iPHONE APP MAKES MOBILE EMAIL SMARTER, NOT COMPLETELY DIFFERENT

BY J.R. BOOKWALTER

SPARK

AT A GLANCE:

Spark has what it takes to become one of the best mobile email clients to date, once the developers squash a few lingering usability bugs.

PROS:

• Smart Inbox sorts messages by personal, notification, or newsletter

• Customized sidebar, swipe, and widget options

• Apple Watch support

CONS:

• Repeatedly displays splash screen at launch

• 1Password and two-factor authentication bugs

• No native iPad support

PRICE:

Free

COMPANY:

readdle.com

THE BATTLE for mobile email supremacy is heating up, with new third-party contestants appearing in the App Store on an increasingly regular basis. Unfortunately, almost all of them have the same fundamental flaw: Trying too hard to be different.

Readdle believes there's still hope for the traditional inbox, and rather than attempt to dumb down this venerable service into little more than a mobile messenger, the productivity software gurus have added a new layer of intelligence instead. The result is Spark (readdle.com), one of the best mobile email solutions around, but more work is required before it can take home the crown.

WORK SMARTER

Spark works with all of your favorite Apple, Google, Microsoft, and Yahoo email accounts, along with plenty of others supporting IMAP. There's also built-in support for the most popular "read later" services, Evernote, OneNote, and cloud storage providers, which can be used to send file attachments or save them directly from messages.

The app features a unified inbox that can be viewed in two ways: Traditional mode, where inbound messages are displayed in threaded conversations similar to Apple Mail; and what Readdle calls a Smart Inbox that automatically organizes email into personal, notification, and newsletter categories to help focus on what's important.

Users can toggle between modes from the inbox or sidebar, the latter of which includes sections for displaying attachments separately from messages, specific email accounts, and consolidated Sent, Drafts, Archive, and Trash views (much handier than Apple Mail). Spark offers a slick option for adding personalized views, which can include frequently accessed IMAP folders or so-called "smart folders" containing saved search results entered using natural language.

Important messages can also be pinned (Spark's version of flags) atop the inbox making them hard to ignore, and other "message cards" can be added as widgets hovering in the top or bottom corner of the inbox for easy access. (Readdle promises new cards are coming with even more useful content and service options for tracking flights, packages, or purchases made on iTunes and Amazon.)
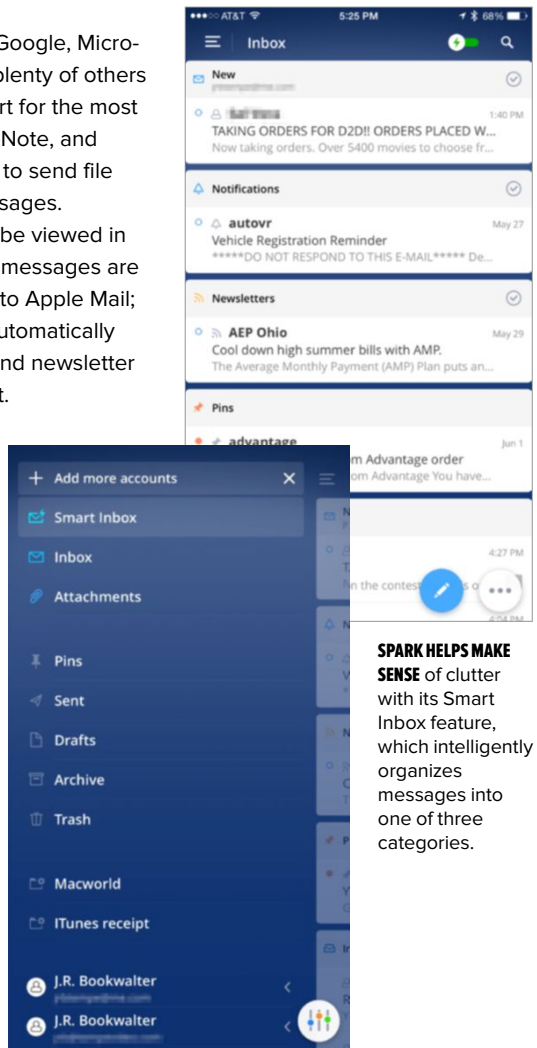
SPARK HELPS MAKE SENSE of clutter with its Smart Inbox feature, which intelligently organizes messages into one of three categories.

THE SIDEBAR can be customized with different ways to view emails, including folders containing smart search results performed using natural language.

BORDERING ON GREATNESS

Spark is also one of the first third-party email apps to support the Apple Watch, offering quick one-tap replies to confirm message receipt (also available from the main app), as well as the ability to dictate proper replies using your voice. Watch owners can view a condensed version of the inbox without having to take the iPhone out of their pocket.
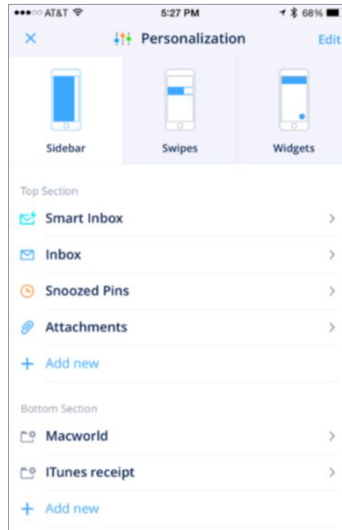
For all that Spark manages to get right in this first version, the app has a number of nagging usability issues affecting two-factor authentication with supported cloud services like Evernote, Dropbox, or OneDrive. The app repeatedly cleared my login credentials after jumping over to Google Authenticator for a new code, while the built-in 1Password integration occasionally locked up, refusing to recognize Touch ID.

You'll want to get used to seeing Spark's splash screen, as it pops up nearly every time the app is launched—a real buzzkill when you just want to dive straight into new emails. The app also isn't particularly good about marking unviewed messages as read when deleted via Notification Center, or clearing notifications from the lock screen once opened with a swipe for that matter.

Despite these complaints, Spark is a well-made, very solid email client with a whole lot of potential. Aside from the aforementioned bugs, the biggest thing missing is native iPad support. I'd also love to see Readdle add spam and other categories to Smart Inbox mode, which would further help tame unruly inboxes.

MAKE IT YOURS using Spark's personalization and customization options for the sidebar, action swipes, and widgets.
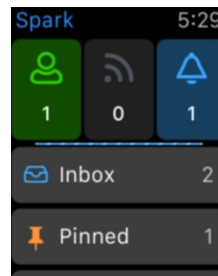
SPARK EXTENDS its condensed Smart Inbox view to the Apple Watch.

BOTTOM LINE

Spark takes a smarter approach to streamlining mobile email that won't alienate longtime users, but suffers from a variety of version 1.0 gremlins. ■

KENSINGTON KEYFOLIO THIN X3: CHARGE YOUR iPHONE WITH THIS iPAD KEYBOARD CASE

BY JASON CIPRIANI

IN AN INCREASINGLY competitive market, Bluetooth keyboard manufacturers have to seek out ways to differentiate themselves from the competition. The forced innovation has lead to a range of products that extend a keyboard's functionality well beyond that of a tool to aide in typing.

One such feature found on the Kensington KeyFolio Thin X3 for iPad Air 2 (go.macworld.com/keyfolio) adds an interesting dynamic to an otherwise standard keyboard: the ability to charge another device using the keyboard's battery.

Even with such a useful feature, if Kensington didn't create a quality keyboard, the ability to charge a device doesn't hold much weight.

A QUALITY CASE

The KeyFolio Thin X3 is a folio keyboard, which means it encloses your iPad in a protective case. It's heavy but not bulky, leaving you with a feeling of protection without feeling like you're lugging around a brick.

The Folio folds back onto itself, allowing you to use the iPad with the keyboard portion of the case tucked behind your iPad.

Magnets inside the keyboard hold the case closed and replicate the Apple Smart Cover method of putting your iPad to sleep and waking it up. It's just enough magnetic power to offer a little resistance, eliminating the case from opening and closing on itself (and the screen of your iPad) when it's being carried.

TYPING EXPERIENCE

When you open the case, a small channel sits just above the keys. Placing the edge of the iPad into this channel triggers a magnet that powers on the keyboard itself. This small feature is sure to save battery life for both devices involved, but it comes at a cost.

Since you have to place your iPad in the channel just so, you can't

KENSINGTON KEYFOLIO THIN X3
🔌🔌🔌🔌½

AT A GLANCE:

This protective case provides a pleasant typing experience, and then goes one step further by letting you top off devices with the built-in battery.

PROS:

• Doubles as an external battery for charging devices

• Typing is smooth and reliable

• Magnetic channel works as an on/off switch

CONS:

• Only one viewing angle when typing

• The extra adapter required for charging another device is one more thing to worry about losing

PRICE:

$100

COMPANY:

kensington.com

change the viewing angle. I did find the angle to be sufficient in most instances, but I'd prefer to have the option of pushing it back to increase the angle while working at a standing desk or when sitting on a couch and typing on my lap.

Typing on the KeyFolio Thin X3 is smooth. I didn't have to suffer a long adjustment period or learning curve. The keys offer sufficient play, and are evenly spaced. I don't have anything bad to say about typing on the KeyFolio Thin X3.

The top row offers keyboard shortcuts, as is now standard for all iPad keyboards, for common iOS functions such as media controls, locking your iPad, and a home key.

WHEN THE BATTERY STARTED TO GET LOW, IT STOPPED CHARGING MY iPHONE BUT STILL ALLOWED ME TO USE THE KEYBOARD.

DOUBLE-DUTY

Allowing the battery inside the keyboard to charge another device is an intriguing idea, and I enjoyed using the feature. The 1650mAh battery inside the KeyFolio is more than enough to top off my iPhone, while still allowing me to get some work done on the iPad. It took roughly 35 minutes to charge my iPhone 6 from 55 percent to 90 percent in my testing.

And when the battery in the KeyFolio started to get low, it stopped charging my iPhone, but still allowed me to use the keyboard.

If it weren't for the small Micro-USB–to–standard-USB adapter that's required to connect another device to the keyboard's battery, this feature would be perfect. I understand why the adapter is warranted; it's the only way to keep the KeyFolio Thin X3 so, well, thin. I just wish there was another way.

The adapter is roughly 6 inches in length, and serves its purpose well. However, I can already see myself losing it while traveling, or misplacing it at home. Beggars can't be choosers, right? I'll take the feature and run with it—at least until I lose the cable.

BOTTOM LINE

The KeyFolio Thin X3 for iPad Air 2 is the best folio-style keyboard I've used thus far. I never felt like I was struggling when typing, and the added functionality of being both a protective case and a spare battery only sweetens the pot.

This is one keyboard-case–battery combo that holds its weight. ■

ARCCOS GOLF: CLUB SENSORS AND iOS APP CAN PINPOINT WHERE YOUR GAME NEEDS WORK

BY ROB GRIFFITHS

AS A GOLFER and a techie geek, I'm always interested in gizmos that marry the two together. A few years back, I wrote about GolfSense, which uses a sensor on your golf glove and an app on your iOS device to track your swing on the driving range.

A more recent entrant in the geeks-and-golfers segment is Arccos Golf (arccosgolf.com), which is also a physical sensor and iOS app (go.macworld.com/arccos-iosapp) combination. Arccos, though, uses 14 sensors—one for each club, and is designed for use while you're playing, not while on the range.

The sensors are very tiny and light (10 grams each), and screw into the hole in the grip at the top of each club. Each sensor links to your iOS

device via Bluetooth. The installation and pairing process is relatively straightforward, if a bit monotonous—you first install all 14 sensors, then pair each to the iOS app, one after the next. Once installed, the sensors look natural and I didn't notice them at all while swinging.

Unlike GolfSense, which is concerned with your swing, Arccos tracks what happens *after* you swing: How far did the ball go, which direction did it go, and how many times did you hit in on each hole. There are GPS scoring apps that will do this, too, but they require you to input which club you hit, and start/stop tracking to get the distances.

The beauty of the Arccos system is that it knows which club you hit, because each sensor is paired to a specific club. It also knows where you hit the ball, because it can sense (through an impact sensor) each shot on a hole. So it simply measures the GPS distance between two shots to get the first shot's distance. It does this all automatically; you just play golf, paying no mind to the sensors.

(Arccos also includes a good GPS rangefinder feature. Tap the screen and the distance between yourself and the green appears; drag your finger around, and you can get the distance to any point from your

THE ARCCOS SENSORS screw into the top of each club; once installed, they almost look like part of the club. I never noticed them while swinging.

ARCCOS GOLF SHOWS you how your handicap breaks down by drives, approaches, chips, sand shots, and putts.

current location.)

Because Arccos knows which clubs you hit, where you hit them, and how far each shot went, it can track every shot of every round, and display them on a map.

By the end of each round, Arccos knows how many shots you hit with each club, how far each went, and whether they wound up in the fairway, on the green, or in a sand trap. It uses this data to generate an official handicap.

But where the system really shines is its analysis of that handicap: it shows you how your handicap breaks down by drives, approaches, chips, sand shots, and putts.

Handicap Breakdown
Overall: 11.8

16.2	16.2	19.4	10.8	4.9
Dr	Ap	Ch	Sa	Pu

MY OVERALL ARCCOS handicap is 11.8. Notice, though, that Ch (chipping) is much worse than that, and Pu (putting) is much better. To improve my score, I should work on chipping.

If a given area has a higher score than your handicap, then you're doing worse than you should be. Similarly, a lower score means you're doing better than your handicap indicates. This can really help you zero in on the areas that need attention.

The web-based dashboard (also available in the iOS app) has a ton of additional information: breakdowns of each round, number of shots with each club, variance from average yardage per club, greens hit in regulation with each club, etc. It's a data geek's dream.

DIVOTS

During play, I found the Arccos system to be generally very accurate. When it wasn't, though, I found that manually editing a shot's location (fairway or rough) is harder than it should be. (The company has told me that this will be addressed in a future update.)

Because the sensors record impacts, if you tamp down repaired ball marks with your putter, you may find Arccos recording a lot of putts. Thankfully, it's pretty easy to delete extra shots.

My final concern is the 14 batteries for the sensors. According to Arccos, they should last 40 to 50 rounds—so if you play a lot, you'll be replacing them at least yearly. The iOS app tells you the state of each

sensor's battery, so you won't be surprised when they die. (Still, I'd keep a few spares in the bag, just in case.)

BOTTOM LINE

At $300, the Arccos system isn't cheap. If you play only a few rounds a year, or don't care about your score, this is not for you. But if you play a lot and want to get better, it's a reasonable investment, given it should last for many years. (By way of comparison, a single round at Bandon Dunes—Oregon's golf mecca—will set you back $310, plus $100 for a caddie.)

I found the Arccos system easy to use—because it just works. Launch the app and play; it doesn't get much easier than that. The statistics are very useful for figuring out what areas of your game need attention, either through practice on your own or lessons.

Personally, I found it so useful that after returning the review unit, I bought one of my own. I guess that's a pretty strong recommendation, isn't it? ∎
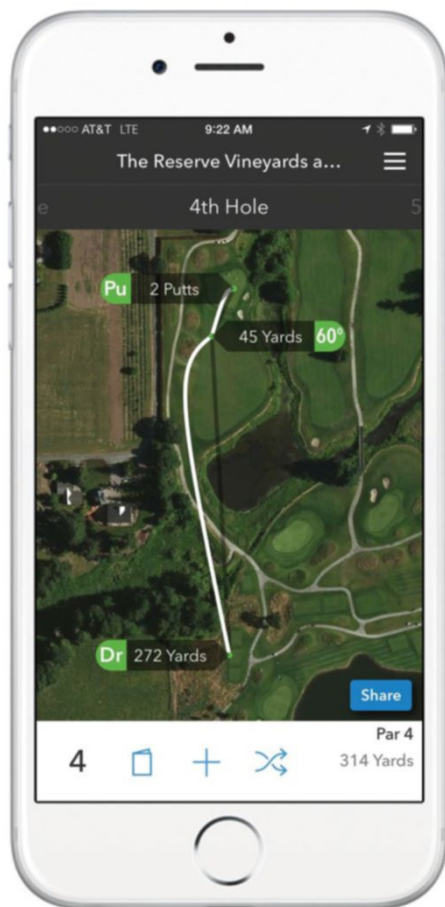
ONE HOLE FROM one of my rounds; Arccos can display a map like this for any hole on any course you've played with the sensors installed. And yes, it wasn't a great chip and I left with a par.

SENSORIA'S SMART SOCKS ARE A FUTURISTIC NOVELTY THAT NO RUNNER REALLY NEEDS

BY CAITLIN McGARRY

I RUN 15 TO 20 MILES a week on New York City sidewalks and through parks without aches or pains, which I attribute to good shoes and good luck. I'm not particularly diligent about stretching or paying attention to my form. Foam rolling? Forget it. But I'd eventually like to start adding longer-distance runs to my routine, and I know I need to be mindful of injuries. So I bought a pair of smart socks—yes, smart socks—to see if intelligent textiles can help me improve my performance beginning at the most basic level: the way my feet hit the pavement.

Sensoria, a maker of sensor-filled clothing like heart rate-monitoring sports bras and T-shirts, is back with a pair of socks that can tell you if

you're running wrong. The company's fitness bundle (go.macworld.com/sensoriafitness), which includes two pairs of smart socks, one Bluetooth anklet, and an anklet charger for $199, officially went on sale in May, but the company has been working on the technology built into its smart socks for years. A successful Indiegogo campaign in 2013 helped the company exceed its fundraising goals, and Sensoria took its finished socks to this year's International CES, where it was honored at the trade show's Innovation Awards. Press previews of the product were glowing, for the most part.

But while intelligent clothing certainly sounds impressive, that doesn't mean it improves your athletic ability more than, say, run-of-the-mill devices like fitness trackers and smartwatches. So I put these smart socks through their paces to see if high-tech clothing makes a difference.

WHEN YOUR SOCKS REQUIRE SETUP

Getting the socks ready to hit the pavement requires a little more effort

THE BLUETOOTH ANKLET
you snap to your sock is lightweight enough, though it does make your leg look a little lumpy.

than pairing Bluetooth headphones to your iPhone. You have to charge the anklet (which needs to be charged daily, in my experience), then install the Sensoria app. Use the app to pair the anklet with your iPhone. The socks are helpfully labeled right and left so you know which sock goes on which foot (normally, I have to go it alone on this part). Then affix the anklet to the magnetic strip on either sock and fold extra material over the device to keep it secure. It's a bit more setup than I normally prefer before a workout, especially on early morning runs when getting myself out the door is a feat in itself, and I haven't even grabbed the Apple Watch and Bluetooth headphones I wear, not to mention the Spotify playlist selection that precedes a typical run. After all that work, I open the Sensoria app, start a new workout, and take off running.

Each sock has three textile sensors sewn in, two in the ball of the foot and one in the heel. According to Sensoria, the socks are made of conductive fibers and function as "textile circuit boards" that send data from the sensors to the Bluetooth anklet. The anklet has an accelerometer to detect your movement, which it then communicates to the Sensoria iPhone app.

The anklet can count steps, measure speed, track mileage, estimate calorie burn, and pinpoint your foot landing and cadence as you run. The mileage and steps are fairly accurate, but the calorie count is way off compared to my Apple Watch (which taps into its heart rate sensor to calculate calories more accurately). The anklet only transmits data on the foot you're wearing it on, so to see stats on both feet, you'll need two anklets.

SENSORIA'S APP OFFERS a neat visual of the pressure in your foot as it changes.

PERFORMANCE ENHANCERS

But it's the cadence and foot landing information that sets Sensoria apart from other fitness-tracking tech. After my first run, the smart socks'
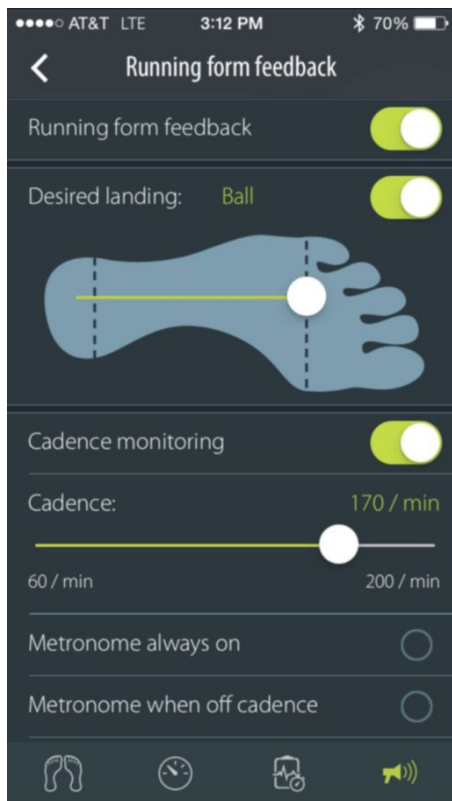
corresponding app showed me some surprising results: I land on my heel 88 percent of the time. Heel striking gets a bad rap because it can lead to knee injuries—and allegedly humans ran on their forefeet back in the good ol' days before shoes were a thing. I did some research to figure out how and why my form was wrong, and realized that I tend to lengthen my stride to increase speed rather than quicken my steps. If I take shorter, faster strides, I land on my heel less. On my next run, I lowered my heel-striking to 70 percent.

Did I need socks to tell me that? Well, no. A running coach can give you the same analysis and offer you more sophisticated tips than a digital coach, which can't really assess your technique. Or if you enlist a friend to record footage of you running, you'd get a pretty good idea of how often you heel-strike.

While there are other ways to analyze your foot landing technique, Sensoria has them beat when it comes to visualizing your performance. While you're wearing the Bluetooth anklet, the app will show you a heat map of your foot as it moves. You'll see the pressure in your foot as it changes in real-time, and you'll also see stats on cadence and foot landing throughout your run. The app's mid-run metrics are more useful in theory than in practice for a couple reasons: Most runners tuck their phones in an armband or pouch, where a heat map of their feet isn't easily accessible, and staring at a screen while you run is so distracting that it will slow you down and defeat the purpose of using performance-enhancing tech accessories altogether.

TRYING TO FIGURE out how to turn off the metronome sound while on a run made for a truly frustrating experience.

HOT SOCKS, IRRITATING APP

I was worried that the anklet would jostle around with the force of my feet hitting the pavement, but it stays securely attached to the sock. And

it's not at all uncomfortable to wear—you probably won't even feel it around your ankle—but the material in the socks themselves is so warm that at the end of each 3-mile run, I couldn't wait to rip them off my feet. I might actually wear these with my winter boots as I trudge through NYC's epic snow piles, but I'll put them in hibernation when the temperature rises above 60 degrees.

SENSOR-LADEN CLOTHING HAS THE POTENTIAL TO KEEP RUNNERS FROM INJURING THEMSELVES WITH POOR FORM.

I'm usually not a fan of the voice-coaching that running apps offer, because it's distracting and not that useful. Sensoria's coach, Mara, offers some helpful advice, like reminders to land on your forefoot more, or to slow down when you're getting ahead of yourself. But the voice-coaching section of the app has so many settings that it's tough to tell what level of advice is useful and what veers into annoying territory. Even after four runs with this app, I still couldn't strike the right balance. And the metronome sound designed to keep your cadence on point is like a mallet through the eardrum, especially when you're trying to listen to music.

NOVELTY VS. REAL SOLUTION

I wanted to love Sensoria's socks, because sensor-laden clothing has the potential to keep amateur runners, pro athletes, and those of us in between from seriously injuring ourselves with poor form—and it's just plain cool. But right now it still feels more like an expensive novelty than a solution for a real pain point. At $199 for two pairs of socks and a Bluetooth anklet, Sensoria's fitness bundle isn't useful enough to justify the price tag. There are more useful high-tech workout accessories you can buy and wear constantly, not just on days when you remembered to wash your socks. (Each pair of socks will survive 60 washes before you have to put them out to pasture. Replacement socks are $49 for two pairs.)

There's also something to be said for paying attention to your body's cues, which are far more informative than any app's metrics. If your technique is bad enough to cause you injury, you'll feel it.

If you're a serious runner looking to quantify every aspect of your performance, you might want to add Sensoria's smart socks to your lineup of high-tech gear. For everyone else, a quality fitness-tracking band and a great running app will do the trick. ∎

SENSORIA SMART SOCKS BUNDLE

👢👢 ½

AT A GLANCE:

Sensoria's sensor-filled socks and Bluetooth anklet are designed to detect how you run and what you can do to fix your form.

PROS:

- Helpful visualization of your feet as they land
- Anklet is lightweight and comfortable to wear

CONS:

- Sock material can make your feet hot
- Can only see data on one foot at a time, unless you buy two anklets
- Voice coaching can be annoying

PRICE:

$199

COMPANY:

sensoriafitness.com

What's new at the App Store

TOUR: MILEAGE LOG

Tour: Mileage Log (tourapp.io/mileagelog-app) lets you track your comings and goings: Just activate the app when you take off in the morning and stop it again when you get home; the app senses whether you're on foot or going by car, automatically tracks all your trips, and senses when you stop somewhere. At the end of the day, tally up your mileage.

Cameo

Cameo (vimeo.com/cameo) has come a long way from its first days as a "fill-in-the-blank" video app that let users dump video clips into a template that did the hard editing work for you. Under new owner Vimeo, it's instead become a simpler, more straightforward video editor. Plenty of filters and music options help you create just the video atmosphere you're looking for.

Hotel Tonight

The free Hotel Tonight (hoteltonight.com) app has a pretty nifty new feature in its latest version: "Escape" lets you know the best hotel deals within driving distance, letting you get away quickly for the weekend without costing a fortune.

Dark Sky

The Dark Sky (darksky-app.com) weather app updated recently with a new layout that features a detailed hour-by-hour timeline for the next 24 hours (and also for each of the next seven days) and advanced notifications for the arrival of certain types of weather. The app also has a UV indicator, to help you protect your skin from the sun's rays. –JOEL MATHIS

Shoulder the burden of your devices

This month we round up bags and backpacks to give you practical and stylish ways to transport your iPad and other devices.

PAD & QUILL

The Leather Backpack (all iPad models; $295, padandquill.com) provides plenty of room for your laptop, iPad, and accessories. Made with full-grain leather and waxed canvas, the backpack features a padded laptop sleeve, a smaller dedicated pocket for your iPad, and various compartments for pens, charging cables, and other accessories. Handcrafted and signed by the artisan, the Leather Backpack sports copper rivets, nickel hardware, and parachute nylon stitches for extra safety. It's available in five fashionable color combinations.

MOLESKINE

The Reporter Bag (all iPad models; $140, store.moleskine.com) features a zippered pocket with metal pullers, a dedicated pocket for tablets, and plenty of room for other essentials for on-the-go computing. Made with Moleskine's classic black leather, the bag comes with an adjustable shoulder strap with concealed sliding buckle and features a fold-over flap with an elastic band that keeps it securely closed during transportation.

HEX

If you need something to hold all of your stuff, the Supply Sonic Backpack (all iPad models; $100, shophex.com) comes with a dedicated fleece-lined compartment for your MacBook, and a padded front pocket for your iPad. Made with water-resistant charcoal canvas, the backpack includes two large zippered pockets for your accessories, an interior organizer for pens and cards, and an adjustable shoulder strap.

STM

The Linear (all iPad models; $51, stmbags.com) is a shoulder bag with plenty of room for your iPad and all its accessories. The bag sports an adjustable shoulder strap, a bigger, soft-lined compartment, a front slip pocket for a small notebook or your passport, and a front zippered pocket for your keys. The Linear comes with a reflective tab for better visibility at night, and different color options like red, blue, black, or grey.

iPad Bags

CASECROWN

Made with durable canvas material, the Campus North Messenger (iPad Air 2; $40, casecrown.com) sports plenty of room for your electronics and your daily necessities. The lightweight case includes a padded compartment with an elastic band and velcro closure, pockets on the back and front for your accessories and iPhone, and an adjustable shoulder strap.

TOFFEE

The Mini Leather Bag (all iPad mini models, iPad 2, iPad Air and Air 2; $150, toffeecases.com) features a dedicated quilted compartment for your iPad Air, a front pocket for your iPad mini, and additional room for your accessories. Made with naturally-milled tan leather, the bag includes a back pocket secured with a magnet for quick access, a zippered pocket inside for your keys or wallet, and a press-lock under buckle to keep the external flap firmly closed. It even comes with a detachable shoulder strap.

How many light bulbs does it take to change an American?

It's no joke: climate change is a critical issue for all life on Earth. But can the actions of one individual really make a difference? Visit nature.org to calculate your impact on the world around you and learn about steps you can take to make the world a better place for us all.

nature.org/calculate

The Nature Conservancy

Protecting nature. Preserving life.™

FIRST LOOK:
Apple Music

SIRI AND BEATS 1 TURN STREAMING ON ITS EAR

Apple Music was worth the wait. Amidst a marketing frenzy and controversy over royalty payments and Taylor Swift's feelings, it was easy to forget that few people had actually used Apple's new streaming service. Apple finally launched Music on June 30, and it was everything we expected it to be (plus a few surprises thrown in for good measure).

Whether you're giving streaming a try for the first time or just weighing the pros and cons of Apple's service against rivals like Spotify, Rdio, Tidal, and Pandora, there's nothing to lose by taking Apple Music (apple.com/music) for a spin. Let's get started.
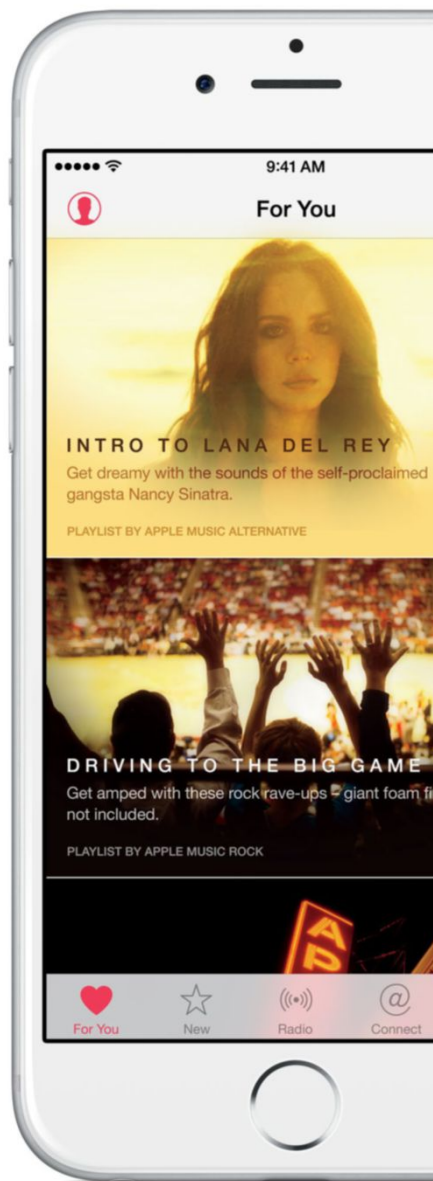
THE SETUP

Once you upgrade to iOS 8.4, diving right into Apple Music is simple. The revamped Music app appears in your iOS device's dock. Open it up, and you're greeted with subscription options. You have to pick between a $9.99 individual subscription and $14.99 family plan, then enter your Apple ID username and password. The subscription will auto-renew when your free 3-month trial ends, but you don't have to set a calendar reminder to cancel on Sept. 30. You can turn off auto-renew (go.mac-world.com/applemusicstop) straight from the Music app by tapping on Account ➔ Apple ID ➔ Manage Subscriptions. You'll still be able to enjoy your free trial even if your flirtation with Apple Music is just temporary.

Apple Music mimics Beats Music's get-to-know-you process by having you tap on genre bubbles to winnow out the stuff you hate and learn what you love. Then it serves up more bubbles with specific artists to really hone in on your preferences. The service uses those indicators, plus your liberal use of the heart button on the songs you want to hear over and over again, to populate the For You section.

For a detailed walkthrough on setting up Apple Music, check out our guide (go.macworld.com/setup).
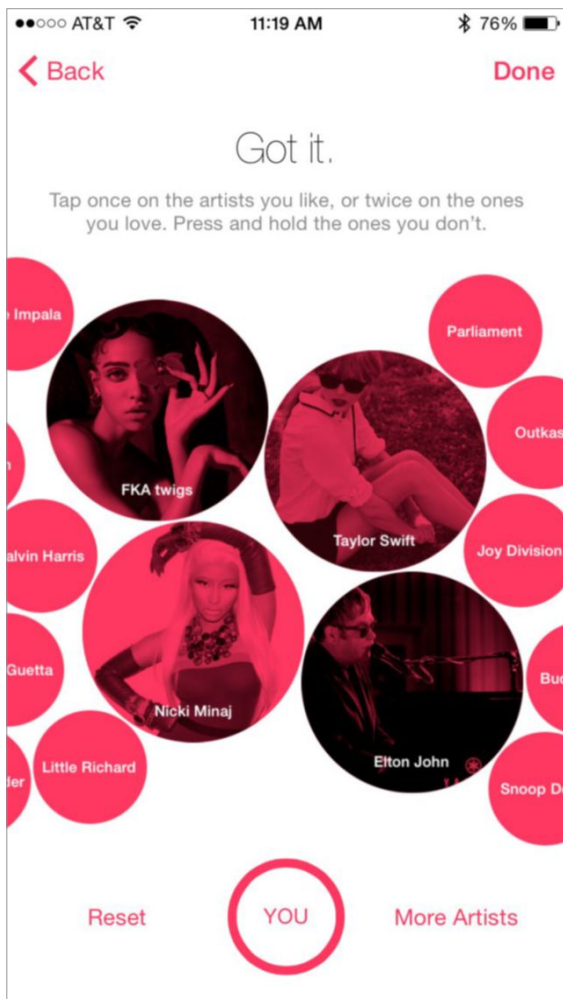
APPLE MUSIC FOLLOWS Beats Music's onboarding process to a T.

Now let's explore the five tabs that make up Music's menu, pinned to the bottom of your screen.

90

FOR YOU

I knew it was love when I tapped on For You and Apple Music served up a hip-hop workout mix called "Trappin' on the Treadmill," which is perfect for my early morning runs, and a playlist of Beyoncé and Jay-Z collaborations. It was sort of astounding how well the app knew me. I've been using Spotify for years and it's never greeted me with such tailored recommendations—and all it took was tapping on a few bubbles.

I expect this section to become more robust as it learns more about my tastes, but the curated playlists and album recommendations For You offers are on a par with other streaming services, and reminded me of Beats Music's editorial point-of-view.

NEW

Here's where Music gets a little complicated. The New section is jam-packed with stuff to listen to, but thankfully the week's new releases are pinned to the top, which is where they should be. (Taylor Swift's 2014 release, *1989*, currently claims the primary slot even though it's far from being new, but being the sole service to stream Swift's opus is Apple Music's claim to fame, so I'll allow it.) Apple Music will have the same new albums and singles each Tuesday that the other streaming services have, so this isn't a differentiator. It's

essential.

Then New starts to dive further into new music. There's Hot Tracks, a selection of songs you might not have heard of but are gaining traction. Keep scrolling for Recent Releases, then head into Top Charts, where you can stream the top songs, albums, and watch the newest music videos on iTunes. All of this is just a tap away, and the experience is completely seamless. (Of the streaming services, only Apple Music and
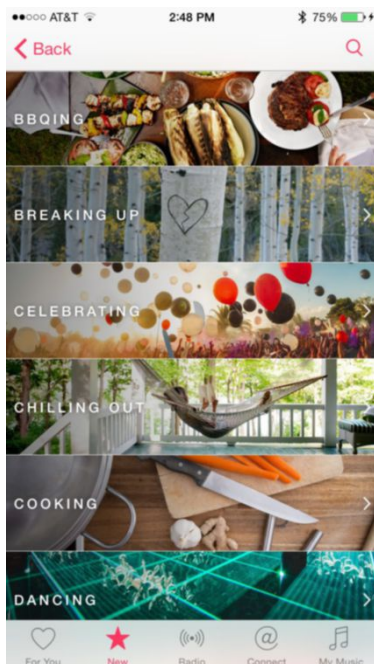
THE NEW SECTION buries activity-based playlists so they're not easy to find.

Tidal offer music videos.)

New also surfaces songs and videos that artists share on Connect, so even if you don't follow an artist, you can still find out what they're doing on the Apple Music's social platform.

Keep scrolling. There's more.

New buries genre-specific playlists from Apple Music's editors and high-profile curators from partners like Rolling Stone and Vice. Want to hear supermodel Kendall Jenner's workout playlist? It takes a few taps to get there, but New is where you'll find it. (New ➜ Curators ➜ Vogue, to be exact.)

Apple also spotlights selected artists—currently Sia—and highlights songs from new artists, and that's all after you're exploring activity-based soundtracks to BBQing, running, and working (these were also snagged from Beats Music and are well worth a listen). The activity playlists should really be featured more prominently, like they are in the new Spotify app's Moments tab, because having to hunt through Music to find a Friday night soundtrack or a Monday morning productivity playlist isn't ideal. New has so much music that I could spend hours wading through it, but its UI is a little too cluttered to be useful.

RADIO

I rarely use other streaming services' radio features, because the best part about paying for streaming is having

POPULAR RADIO PERSONALITY Zane Lowe kicked off the first hour of Beats 1 with a song from British band Spring King.

on-demand access to the songs I want to listen to right now. But Apple is still pushing for radio to succeed, and maybe it's on to something—243 million people listen to terrestrial radio in the United States every week.

One of Apple Music's marquee features is Beats 1, a 24-hour worldwide radio station anchored by radio personalities Zane Lowe, Ebro Darden, and Julie Adenuga. The station kicked off at 9 a.m. Pacific/12 p.m. Eastern with an unlikely first song, "City" by the British band Spring King. They were as shocked as anyone else to hear their song launch the new service.

Beats 1 will broadcast an eclectic mix of tunes, including exclusives from artists like Pharrell Williams, whose "Freedom" debuted on the station in its first hour. (Lowe even played it twice in a row. No, that wasn't a bug; it was a feature.)

BEATS 1 WILL BROADCAST AN ECLECTIC MIX OF TUNES, INCLUDING EXCLUSIVES FROM ARTISTS LIKE PHARRELL WILLIAMS, WHOSE "FREEDOM" DEBUTED ON THE STATION IN ITS FIRST HOUR.

"Our genre is 'great,'" Lowe said, summing up the Beats 1 ethos.

If you hate FM radio stations hosted by DJs that talk over songs and play whatever they want, regardless of status on the pop charts, Beats 1 isn't the station for you. Apple Music features a slew of other

VIDEO
To view this video, go to go.macworld.com/applemusicvid

IDG.tv
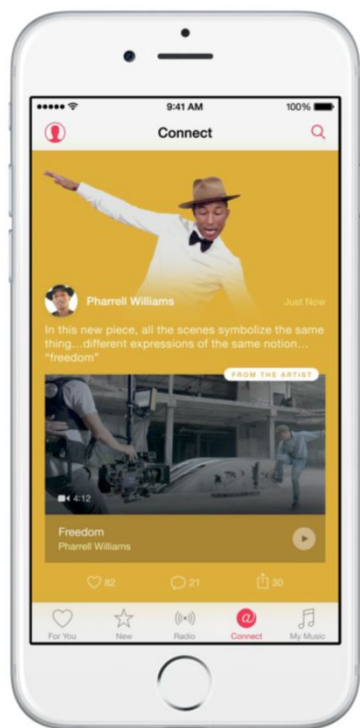
CONNECT COULD GET much better, but right now there's not a lot going on.

themed radio stations in the Radio section with no humans to disturb you. Want to put on Disney Princess Radio for your kids' living room dance party? Done. Need a workout station to provide the soundtrack for your morning run? Apple Music has it. But give Beats 1 a shot—you just might discover a song that no algorithm would've picked for you. Plus, celebs like St. Vincent, Dr. Dre, and Elton

John are hosting their own blocks, so you'll get some insight into what your favorite artists are listening to. (See the upcoming show schedule: applemusic.tumblr.com.)

Each station, even Beats 1, gives you a slew of options to act when you hear a song you love. Just tap on the hamburger menu (denoted by the three dots), and add a song to a playlist or to My Music, share it using the share sheet, or navigate to iTunes to buy it. In Beats 1, these options weren't available for every song every time, but we're not sure yet if that's a glitch or related to Apple's licensing deals with record labels.

CONNECT

I was skeptical about Music's Connect feature from the moment Apple announced it at WWDC, because there are already so many social platforms I can use to follow my favorite celebrities. Beyoncé posts personal photos and song clips on Instagram. Taylor Swift uses Tumblr to connect with her fans. It's unclear if Connect can become the place these musicians will turn to, but right now, it's pretty bare-bones.

FKA twigs recorded some choreography she's practicing for her song "In Time." Feist shared out a link to an album her friend released this week. Alabama Shakes posted a

video of a recording session. The glimpses into your favorite artists' work are interesting, but not hugely impressive, given that you can see this kind of behind-the-scenes action everywhere.

Connect would be much more useful—and more social—if you could connect with friends on the platform to share songs or collaborate on playlists instead of simply following artists.

I'm planning to stick with Connect to see if it improves, but if you have no interest in following artists, then banishing Connect from your Music is super simple. Just head on over to your iOS device's Settings ➜ General ➜ Restrictions and toggle off Apple Music Connect. The tab will disap- pear from your Music dock, replaced with Playlists (which are decoupled from My Music when you don't enable Connect).

MY MUSIC

When you fall in love with a song, tapping on the three dots next to the title brings up a list of options: You can add it to a specific playlist, share it with a friend, queue it up to play next, or save it to My Music, which is where your entire library lives. Songs you've purchased from iTunes sit alongside playlists you've built just to stream. You can organize your library however you'd like—by album, by

artist, by song, or by music that's available to listen to offline. Offline listening is a hugely important offering for any streaming service, given what a data-hog streaming can be, so Apple makes it very easy to move your must-have music offline.

You can also remove downloads to save space on your phone while keeping them in your iCloud Music Library (just tap the ellipses next to the song title and tap Remove Download). You can play with the settings to manage music storage on your phone by heading over to
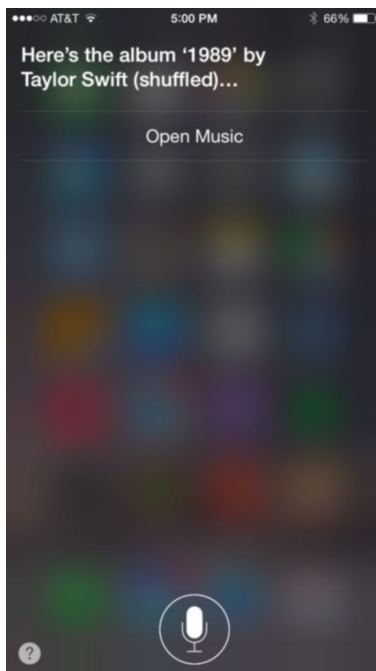
SIRI INTEGRATION with Apple Music is huge because it offers something no other service can.

Settings ➜ General ➜ Usage ➜ Manage Storage ➜ Music.

SIRI

So Connect isn't all that great yet, but social networking was never Apple's strong suit. Where Cupertino consistently kills it? Integration. The way Siri works seamlessly with Music to queue up the songs you want to hear is a perfect example of how Apple products can offer you a frictionless experience—and it could be a game-changer when it comes to streaming music. Never before have I been able to tell my phone to play an album just released today and have the first track thrumming in my earbuds within seconds. It's actually kind of magical.

Siri's capabilities when it comes to Music are incredibly powerful. She can do the basics, like play a specific song, album, or artist. She can also add songs to your queue, shuffle an album or an artist's entire catalog, find chart-topping hits from years past, and figure out what you mean when you tell her to "play that one song from *True Detective.*" (She

chose the theme, which is what I was looking for.) You don't even have to have the app open for Siri to do all of this heavy lifting. I don't often find uses for Siri, but her integration with Music is a huge selling point for me, and just might convince me to give up my Spotify premium subscription.

THE VERDICT

Apple Music is free for three months and comes preinstalled when you upgrade to iOS 8.4, so giving the streaming service a shot is a no-risk, no-effort move. I recommend taking it for a spin if you use a competing service to see what you like and what you don't. If you prefer owning your music to streaming, Apple Music makes it incredibly easy to discover new songs you might have never listened to before and then buy them straight from iTunes.

Between Siri, music videos, Beats 1, and the playlist-curation and recommendation tech Apple lifted from Beats Music, Apple Music makes a strong case for streaming and proves the Cupertino company just might revolutionize music all over again. ■

Two worlds.
    One dream.

Singers and Scientists share more than might be expected. Whether it's a breakout melody or a breakthrough in research. When it comes together, everything fits. It can change lives forever. Stand Up To Cancer supports the collaboration, innovation and research that are turning discoveries into viable treatments and possibly, one day, a cure.

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Jennifer Hudson, Stand Up To Cancer Ambassador   Shiva Malek, Ph.D.

6 REASONS
TO GET EXCITED ABOUT OS X EL CAPITAN
(Bug fixes are too a feature!)

BY JASON SNELL

’m not feeling a lot of love for OS X El Capitan out there. That might not be surprising, given that it’s firmly in the tradition of Mountain Lion and Snow Leopard—new-feature-light, speed-and-stability-focused OS X updates.

But as someone who reviewed Snow Leopard and Mountain Lion, I can tell you that not only did these cat modifier cat releases contain a bunch of bug fixes and other internal tweaks, they also managed to add a bunch of new features, too. Apple can’t help itself.

So let me present to you six reasons to be excited about what’s coming in El Capitan.

SPOTLIGHT AS SEARCH ENGINE

Some people love clicking around looking for things, whether it’s on their computer or on the Internet. For those people we have navigation bars on websites and the Finder on the Mac. But some people would really rather just type what they’re looking for into a box and hope that the result works for them.

The better the results from those searches get, the more time you can save versus clicking around. With El Capitan, Apple is making Spotlight even more of a search engine than it was previously. Yosemite brought a bunch of new Internet data sources to Spotlight, and El Capitan brings even more. If you're wondering about something, be it on your Mac or out in the rest of the world, Spotlight can try to bring it to you.

And in El Capitan, Spotlight will also react to natural-language queries. You'd be surprised to discover just how many people type complete sentences into search boxes on the Web. Sure, all of my searches are based on keywords (`delete facebook account`), but some of the most popular searches on the web are complete sentences (`how do I delete my facebook account`). Spotlight now speaks that language!

Apple doesn't need to launch its own search-engine competitor to Google, Bing, and DuckDuckGo. It can integrate all of those search engines while overlaying its own data sources—catching many of your queries before you have to resort to a web search engine. It's happening on iOS and it's happening in El Capitan.

NOTES—YOU HEARD ME!

I know it's not cool to like the Notes app, either on iOS or on the Mac. After all, it's just a next-generation

version of Stickies. (By the way, I am shocked to report to you that the Stickies app is still kicking around!)

Notes doesn't have features, but that's okay. It runs on all my devices and syncs between them. I use Notes on iOS all the time when I just need to toss text somewhere and access it later somewhere else. In iOS 9 and El Capitan, Notes is getting an upgrade. It has finally abandoned IMAP syncing (seriously, why did Notes spend years syncing via your email account?) and properly uses iCloud now. And there are numerous new features, including support for clippings and checklists.

According to Apple, half of iPhone users use Notes regularly. I'm one of those people, and I refer to those notes on my Mac frequently. I'd never call Notes an essential app, but it's ubiquitous, and improving it seems only right.

SAFARI GETS PINNED

Safari's my default web browser and I use it endlessly, so I'm happy to see Apple continuing to find new ways to improve it. It would be really easy for Apple to rest on Safari development and consider web browsing a solved problem, but that hasn't happened.

In El Capitan, Safari adds support for muting of audio in stray tabs—huge for dealing with sites that really like to play video automatically. As someone who doesn't rely on RSS feeds but does have a collection of sites I like to visit regularly, I'm enthusiastic about the new Pinned Sites feature, which is sort of like a fancy version of the Favorites Bar, keeping your very favorite sites one click away. It's the kind of feature that novices and power users alike can appreciate.
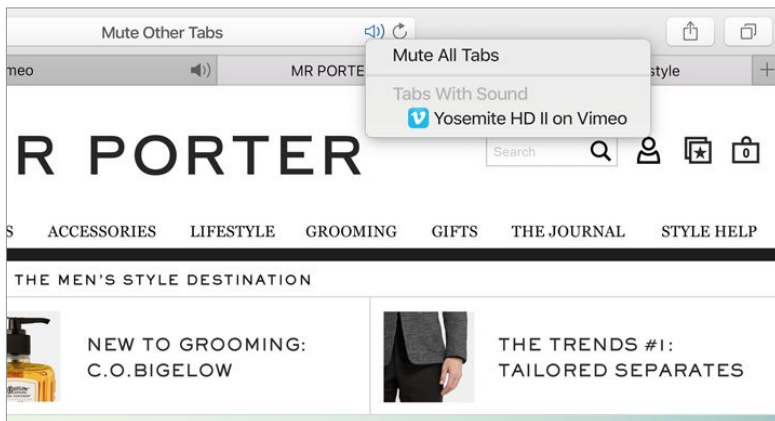
MAIL SWIPES TO SUCCESS

I've still got a love/hate relationship with the Mail app. I use it for a while, then quit it for an alternative, but eventually seem to end up back in its clutches. But the fact is, most Mac users who use a Mail app use Mail—it's right there. And as with Safari, Apple keeps pushing the ball forward.

I used the Mailbox app for a while and really enjoyed its interface, which (as on iOS) lets you swipe on messages to file or delete them. It's a metaphor that really works if you're using a trackpad, and Apple's integrating it into Mail with El Capitan. It's not the most discoverable feature in the world, but if you do learn how to use it, it's quite a time saver.

UPGRADES TO PHOTOS

Photos for Mac arrived a few months ago, and is getting its first notable update with El Capitan. By far the most glaring feature omission from Photos 1.0 was the ability to add or edit location information. That feature has been added in the new version of Photos that comes with El Capitan, along with other metadata editing features, both individually and in batches.

There's also support for third-party photo editing extensions, which should please Aperture users who have made the move to Photos and found it limiting. It's unclear which third parties will actually write editing plug-ins for Photos, but the capability will be there in El Capitan.
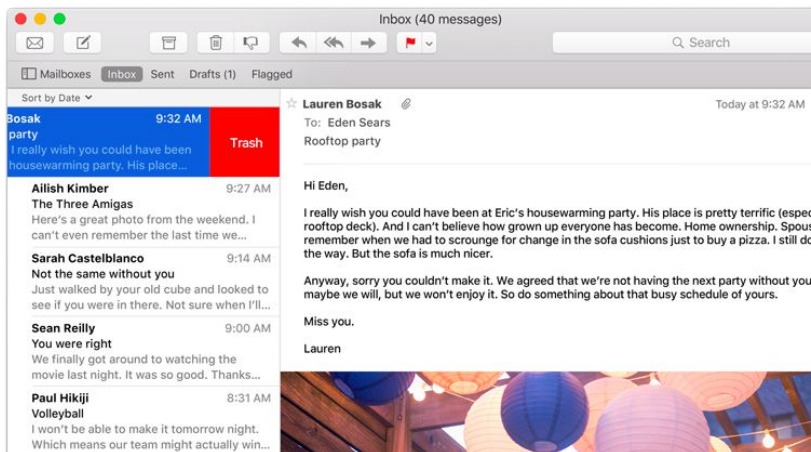
SPEED AND STABILITY

Let's not forget that bug fixes and speed boosts are features! And they're worth getting excited about. I've heard from many Mac users who have been frustrated by bugs they've encountered in Mavericks and Yosemite. Apple's upgrade cycle, providing a new version of OS X and iOS (and now maybe watchOS, too?) every single year, seems relentless. It's probably wise for the company to ease back to more of a tick-tock approach, with a major release followed by a year of retrenchment and focus on refining the new stuff that's been added in recent years.

It's unclear whether that new tick-tock approach is happening or not, but at least for this year Apple's OS releases seem to be tocking. That's good. Adding support for Metal on OS X may not seem like a great user feature, but it'll speed up apps, creative-professional suites, and games alike. Fixing bugs isn't necessarily something to be shouted to the stratosphere, but if you're someone who's been bitten by those bugs, it can be a huge relief. ■

PODCAST
go.macworld.
com/podcast462
to hear about
El Capitan.

Fire up your Mac's firewall

Worried about your networked Mac? Protect yourself with
OS X's built-in firewall. Here's how.

BY JEFFERY BATTERSBY

After the Working Mac column about scanning your Mac for viruses, I received an email message from Yolanda: "Hope you can help your readers with something that I haven't found. I've just purchased my first Mac after being on Windows for about 15 years, so I'm looking around for reputable recommendations of free and good antivirus/firewall programs."
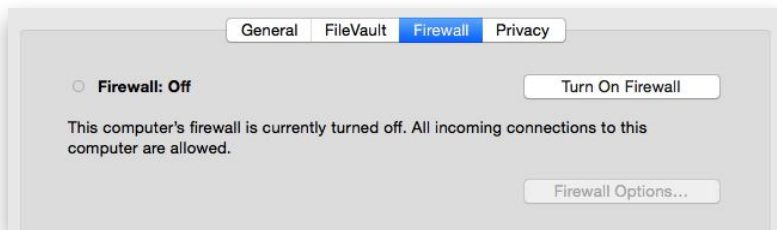
The article Yolanda linked to (go.macworld.com/scan) recommended ClamXav for scanning your Mac for viruses, but Yolanda was correct, there was no mention made of firewall applications.

Most people, whether you're using a Mac or a PC, are aware that commercial virus scanning applications such as Norton Security (go.macworld.com/norton) not only provide virus and malware protection, they also include firewall protection.

What's a firewall? In the simplest terms, it's hardware on your network or a piece of software on your computer that limits the way other computers can send data to or receive data from your Mac. (For a more detailed explanation on Firewalls, have a look at Jeff Tyson's, "How Firewalls Work" go.macworld.com/firewalls).

While you can certainly spend money on firewall applications for your Mac—the aforementioned Norton Security application will set you back a minimum of $45 per year—your Mac, no surprise, already includes an excellent, built-in, free application-level firewall (go.macworld.com/freefw) that, with minimal configuration, will do everything you need. So, why spend anything at all, when you can have great for free?

You'll find your Mac's firewall in the Security & Privacy preference in the

System Preferences app.

> Open System Preferences.

> Click Security & Privacy, or

> Type Firewall in System Preferences' search field and select Turn Firewall On Or Off.

Before you can make changes to the Security and Privacy preference you need to authenticate as an administrator:

> Click the lock at the bottom left of the Security & Privacy preference.

> Enter your password.

To start using the firewall, once you've entered your password, all you need to do is click the button that says Turn On Firewall

That's it! But there's more to the built-in firewall than meets the eye, so let's take a look at what's going on behind the scenes.

> Click the button that says Firewall Options.

Depending on the applications you have running and which sharing services you have turned on, what you'll see when you look at Firewall Options may be a little different than what you see in the screenshot we use to illustrate the step here:

If you don't see anything, that means you don't currently have any applications running that are sending or receiving network traffic.

If you do see something in the list, it means that the application-level firewall trusts that application and is allowing it to send and receive network traffic. How and why the firewall trusts an application is more than we can go into in detail here, but it's because of something called Code Signing Certificates (go. macworld.com/code-sign), which Apple only issues to trusted applications. Any application with one of these trusted certificates can request and be granted access to allow traffic to pass through the application-level firewall.

Let's see how this works automatically:

> Make sure that the only box that's checked is the one that reads Automatically Allow Signed Software To Receive Incoming Connections.

> Take note of the applications noted in the list of allowed applications.

> Click OK.

> Open the Sharing preference in System Preferences.

> Put a check in the box that says File Sharing or, if that's already selected, put a check in one of the other sharing boxes.

> Reopen the Security & Privacy preference.

> Click the Firewall Options button.

> Look at the list of allowed applications.

If you selected File Sharing in the Sharing preference, you should now see File Sharing (AFP, SMB) in the list of allowed applications.

The beauty of Apple's built-in application-level firewall is that you don't need to do anything other than turn it on. Your Mac will take care of determining whether or not an application should be allowed to send and receive network traffic. ■

5 ways OneNote is better than Apple's Notes app

BY JASON CIPRIANI
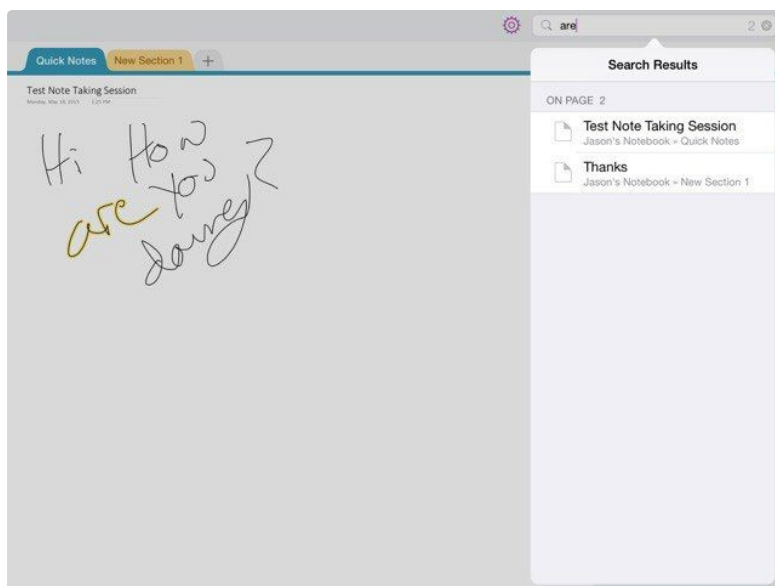
The iPad is a convenient note-taking tool for the classroom and boardroom alike. And while Apple's own Notes app is more than equipped to handle any text you can throw at it, it lacks breakthrough features to keep you coming back.

Enter Microsoft. What? Microsoft? Yes, I'll say it: Microsoft has a better iOS app than Apple, and it's called OneNote. OneNote does so much more than the Notes app that comes installed on your iPhone and iPad.

How is it better? Glad you asked.

ALL IT TAKES IS A FINGER (OR STYLUS)

There's something intimate about seeing your own handwriting on a piece of paper, or in this case, on a screen.

With OneNote for iPad, you can jot down notes, or circle and highlight important bits of information, as you would on a piece of paper. With options to change the marker type and color, you can get as fancy as you'd like. Not to mention, the doodles you inevitably end up drawing in the margins will look better than ever.

All jokes aside, the ability to jot down notes without tapping away on a keyboard is a valuable feature OneNote excels at. The iPhone version of OneNote lacks this feature, but that makes sense given the smaller screen size—you wouldn't really be able to see what you're writing with your hand in the way.

IT'S ALL SEARCHABLE

The Notes app offers a search field to find information tucked away in a note, and so does OneNote. But where OneNote pulls ahead of Notes is that a search also sorts through your handwritten notes, thanks to handwriting recognition.

The only downside is you need to have a data connection on your iOS device in order for OneNote to do its magic of deciphering your handwriting. So long as you have a data connection, your notes are fully searchable within a few minutes.

OneNote even supports chicken scratches—I have horrible penmanship, and OneNote was able to easily identify my writing after my notes were processed.

YOU CAN ADD DOCUMENTS, FILES, AND PICTURES

OneNote doesn't stick to the tried and true single line format of text. If you want to place a bullet point list in the middle of your screen, with a photo next to it, go right ahead.

Additionally, you can add photos and attachments from outside sources such as OneDrive, Dropbox, and even iCloud Drive. Those

APPLE'S NOTES SYNC from iOS to Mac. But OneNote also works on Android, Windows, Chrome, and Kindle.
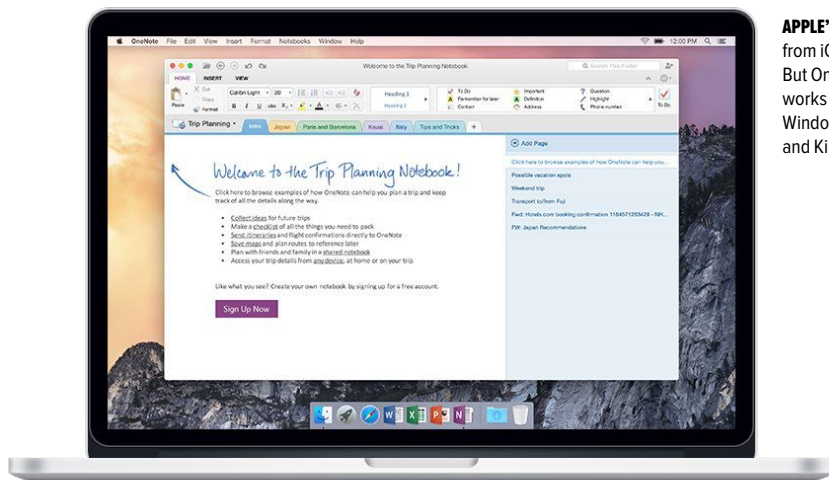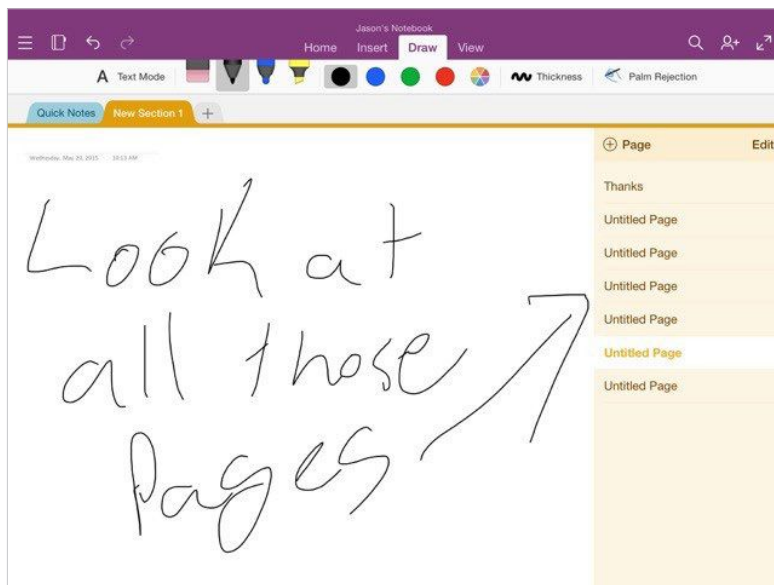
attachments then become part of the page, with the potential to be manipulated and used as you see fit.

IT'S MULTIPLATFORM

While we would all love to exclusively use Apple products, it's not always possible. With OneNote, it doesn't matter what platform you find yourself using, your notes are there.

Using your Microsoft account, OneNote will sync your notebooks and pages across the cloud regardless of the platform your using. And OneNote is on all of them: Android, Windows, OS X, Chrome, Kindle tablets, and the web.

When you want to share a page, you can either share a link or export it as a PDF and email it from directly within OneNote.

ORGANIZE EVERYTHING IN NOTEBOOKS

Instead of forcing you to manage a never-ending list of documents, as Notes does, OneNote provides the option to create notebooks. For example, you can have one for work, school, your personal life, and maybe even a daydream notebook.

You can then add pages to each notebook, further organizing content within a category. This makes it even easier to sift and sort through.

IT'S JUST BETTER

Microsoft has done a tremendous job of bringing OneNote to Apple products (amongst others). With frequent updates and feature additions, its clear OneNote has the advantage on Apple's Notes. The five features I cover here only begin to scratch the surface of OneNote's full capabilities.

For example, the Mac app recently gained the ability to record voice notes—hopefully we'll see that feature brought to OneNote for iOS soon.

While there's something to be said about the simplistic approach Apple has taken with Notes, sometimes it's just not enough. ■

Welcome to Greenbot, a website for Android enthusiasts.

We've got the 'droid info you're looking for. Helpful tips, critical reviews, and expert analysis for passionate Android users of every experience level.

www.greenbot.com

green bot
BY IDG COMMUNICATIONS

Make your own app with these DIY services

These three make-your-own-app services will help your business go mobile in no time

BY JACOBSSON PUREWAL
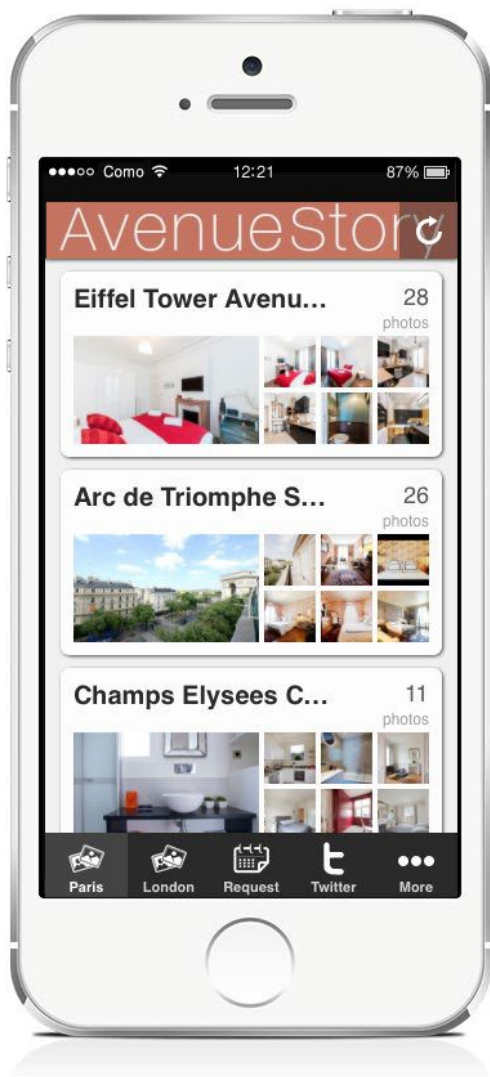
Small business owners: Have you ever considered going mobile? That is, making an app for your business, whether it's a restaurant, store, or events company? It's not a bad idea. After all, you know your customers are on their phones 24/7, so you might as well capitalize on that.
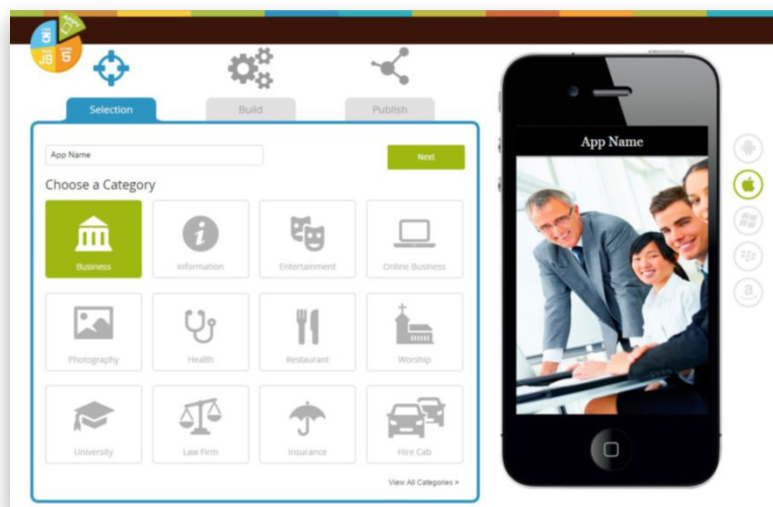
Good news: Going mobile isn't nearly as difficult or as expensive as you might think. In fact, you don't even need to hire an outside developer to create an app for your business. There are plenty of do-it-yourself app-building services on the market, which offer intuitive app-creation tools and app hosting for a low monthly fee.

I tried out several DIY services and found that Appy Pie, Como, and

GoodBarber are all especially user-friendly for people who have never built so much as a website (let alone an app). Here's how they work.

APPY PIE
Appy Pie prides itself on being simple and easy to use—hence its tagline, "Make an app, as easy as pie." This code-free drag-and-drop app builder is easy to navigate (and supported with helpful pop-ups,
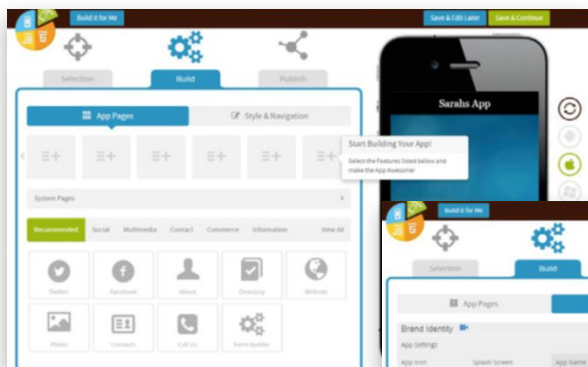
ADD EDIT PAGES through Appy Pie's drag-and-drop interface (left), and customize the way your app looks and its navigation functions (below).
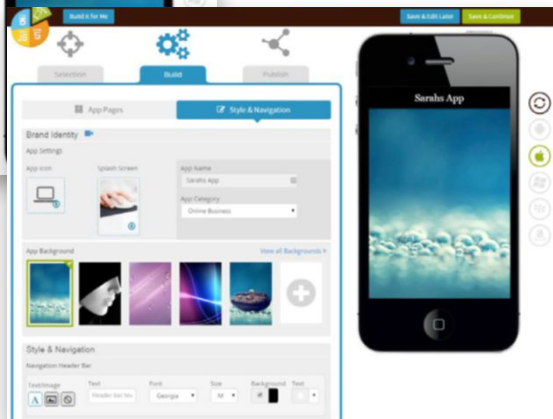
video tutorials, and a live chat box), and even a complete tech newbie will be able to create a professional-looking app in a few hours. The main drawback of Appy Pie's service is that the app page layouts are fairly rigid, and so anyone not familiar with code will end up with a fairly cookie-cutter app. This isn't necessarily a bad thing, but if you're looking to create a work of art, Appy Pie's basic builder may be too simple for your project.

Getting started with Appy Pie is a snap—you don't even have to sign up for an account to start building your app for free. Appy Pie offers three tiers of paid services, as well as an extremely limited free account, which basically functions as a trial for the paid services. The three tiers are labeled Basic, Gold, and Platinum, and, like most of the services in this roundup, the middle tier will get you the most functionality for your money. The Basic plan starts at $7 per month, only

supports Android devices, and does not allow for monetization (ads). The Gold plan starts at $19 per month and supports both Android and iOS devices, and allows for monetization and unlimited push notifications. The Platinum plan starts at $33 per month, supports Android, iOS, Windows Phone, BlackBerry, and Kindle Fire, and also allows you to remove Appy Pie's branding—essentially creating a "white label" app.

Building an app with Appy Pie is a three-step process: First, you name your app and choose a category; second, you build your app and add content; and third, you publish your app (though you'll still have to wait for

it to be submitted and approved before it shows up in any app stores). Step one is fairly straightforward—your app's name can be no longer than 30 characters and cannot contain any special characters, including apostrophes. (If your business is called "Sarah's Diner," or something similar, you can change the display name that appears at the top of the app in step two.) Appy Pie then lets you categorize your app in one of 24 categories (this can be edited later), and has categories for businesses, law firms, restaurants, charities, as well as a broad "other" category.

Step two is the longest step, and this is where you'll do all of the app creation. Appy Pie's app builder features what it calls a "drag-and-drop" interface (but what is actually more of a "click-and-fill-out-a-form" interface)

alongside a large live preview of what your finished app will look like. The builder has two main sections—App Pages, which is where you will add and edit the different pages for your app; and Style & Navigation, which is where you can edit how the app looks, including changing the background, icon, splash screen, colors, and navigation layout.

Adding pages and content to your app is "as easy as pie." In the App Pages tab, you'll see several boxes along the top of the screen, each of which represents a different page in your app. To add a new page, simply click one of the boxes that doesn't currently have a page, and then choose a page layout to add it to the mix. Depending on what type of business you have, Appy Pie offers a variety of premade layouts, including
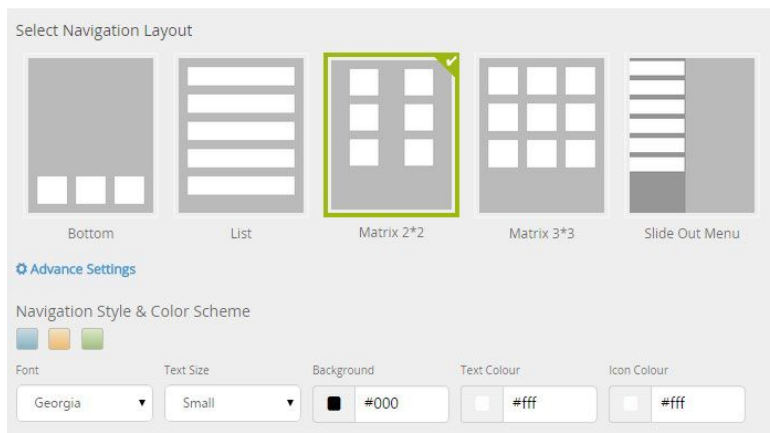
HERE'S A BETTER LOOK at Appy Pie's navigation options.
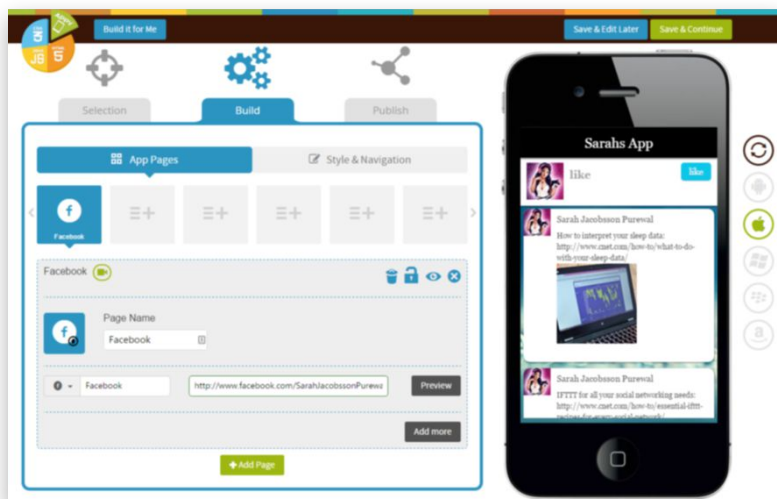
information pages (about your company, contact, customer testimonials), social media pages (Facebook, Twitter, Google+, LinkedIn), multimedia pages (RSS feed, photo, video, blog), and mobile commerce pages (commerce, coupons, loyalty cards). Each layout has its own specific customization options, but you'll always be able to change the page's name (how it appears in your app's navigation) and icon.

Some of Appy Pie's page layouts let you build your own content—there's a form builder for creating fillable forms, a quiz option, and straight text and code pages if you really want to build from scratch.

Once you've added pages to your app, you can start editing the aesthet-

ics in the Style & Navigation tab. Here, you can change your app's icon, upload a new splash screen, change your app's category, and edit the title that appears at the top of the app screen (you can change it, upload a banner, or choose to have no title displayed at all). You can also upload a new background image—only one for the entire app, though, not per page. Appy Pie lets you pick from five different navigation layouts, including the classic five icons along the bottom of the screen, a list, two different matrices, and a menu that slides out when you tap a button in the upper left corner.

If you spend a few hours with Appy Pie's builder, you can make a polished, professional-looking app with ease.

While it won't necessarily be in the running to win any design awards, it should suit most small businesses, restaurants, and events looking to get their info out there and integrate social media and mobile commerce. The nicest thing about Appy Pie is that it's clearly designed with beginners in mind, and each page layout comes with its own video tutorial just in case you get lost.
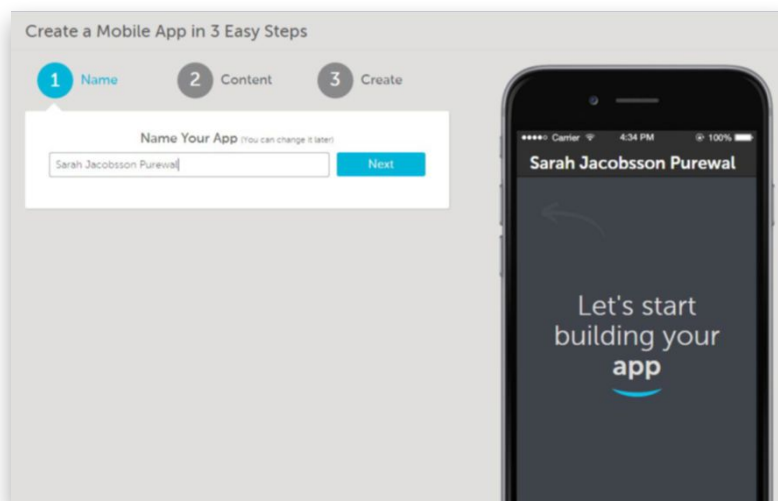
COMO

If you've already got a robust Facebook page or website, Como makes app-making even easier than Appy Pie does. Como is very similar to Appy Pie, but with one major (possibly game-changing) difference—in the second step of Como's app-build-ing process, you're asked to input your Facebook page or website URL, and then Como pulls your existing content and info to create a template for your app. This feature is especially nice because it helps give you an idea of what pages you might want to add to your app (Appy Pie recommends pages based on your app category, but Como chooses a category for you).

Of course, if you don't have a Facebook page or a website, you can still use Como's app builder; you'll just have to upload your own content.

Como's app-building process also involves three steps: First, you name your app (apostrophes are not banned); second, you input your Facebook page name or website URL
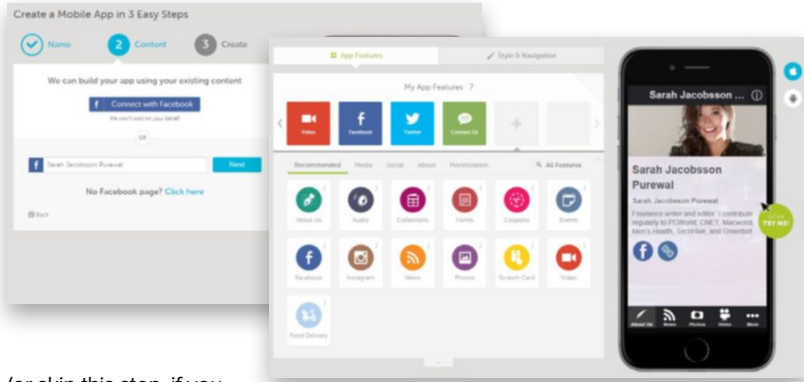
(or skip this step, if you don't have a Facebook page or website); and third, you edit your prebuilt page and/or build your page in Como's app builder. Como's builder looks a lot like Appy Pie's, except it's a bit cleaner and more polished-looking. Like Appy Pie's builder, there are two sections: App Features, which is where you'll add pages and content; and Style & Navigation, which is where you'll edit the look of your app. There's also a large live preview of what your final app will look like to the right of the interface.

If you used step two, your app will already have some pages. To add a new page, click the Add Feature button and pick a page layout from the menu. Como offers plenty of page-layout options, including information pages (about your company, email/call/contact us, and map), social media pages (Facebook, Twitter, Instagram, RSS feed), and monetization pages (food delivery, mobile commerce,

loyalty cards, and coupons). For mobile commerce, you can add a Shopify store, integrate Yelp or OpenTable reviews, and create catalogs of items. Each page has its own specific customization options, but most pages let you edit the page name, icon, and background image.

In Style & Navigation, Como offers themes (background image, color scheme, navigation style) based on
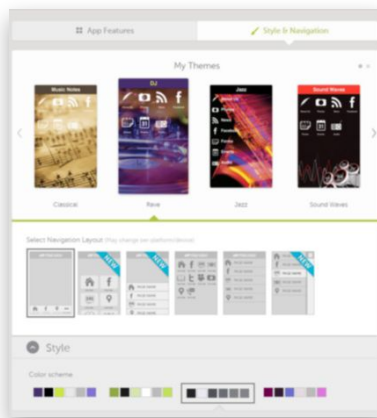
your app's category. For example, if you classify your app as a musician's app, you'll see themes like DJ, Jazz, and Sound Waves. You don't have to use a theme, of course, but they offer a nice way to see how your page looks in different layouts and color schemes before you make additional tweaks. Here, you can change your app header, icon, splash screen, background image, and colors. You can also pick one of six different navigation layouts, including the classic five icons at the bottom of the screen, two different matrices, two different lists, and a slide-out menu.

Unlike the other services in this roundup, Como doesn't offer tiered pricing plans. Instead, there are only two options: The free plan, which limits you to five app downloads and 50 mobile visitors per month (basically a trial plan), or the paid plan, which starts at $29 per month and gets you full

functionality, including unlimited users and downloads, unlimited push notifications, and advanced analytics.

Como's app builder is more intuitive than Appy Pie's, and everything is slightly more streamlined for businesses who need a solid, professional-looking app without having to spend hours uploading and adjusting content. It's also more expensive, though, since that $29 per month price is only what you get if you sign up for the two-year plan (it's $33 per month billed annually, while Appy Pie is $19 per month billed annually).
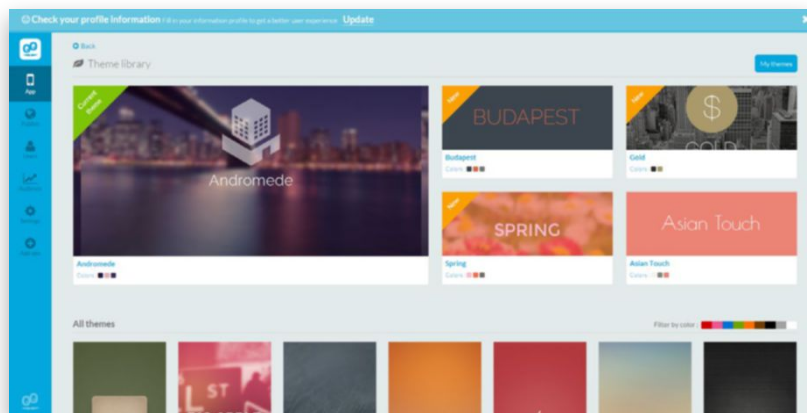
GOODBARBER
Both Appy Pie and Como are good choices if you're looking to build a straightforward, no-nonsense app for your business or restaurant. But what if you're looking for something a little more whimsical and, well, sexy?

GoodBarber is all about sexy mobile

GOODBARBER'S SPLASH PAGE is a minimalist rainbow blend of watercolors and text.
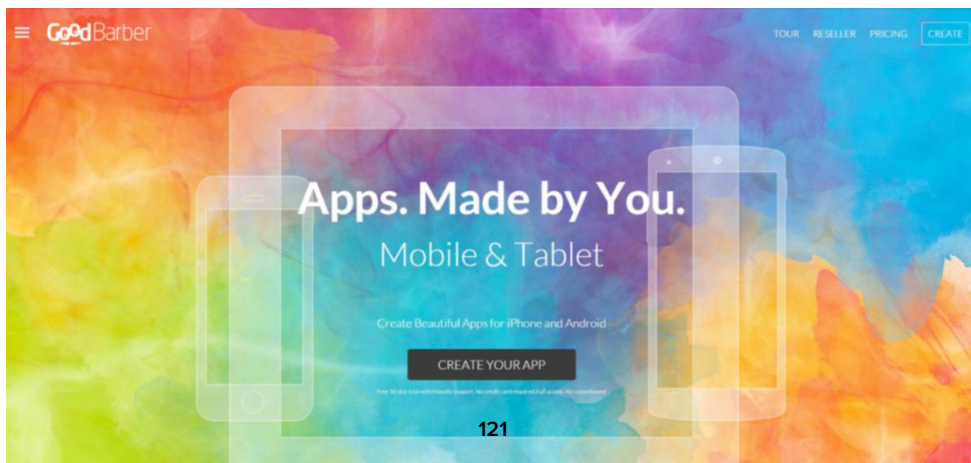
apps—heck, even its splash page is a minimalist rainbow blend of watercolors and text. While Appy Pie offers up a few generic stock photos, and Como gives you four or five basic themes, GoodBarber has an entire theme library, complete with custom fonts and high-resolution stock photos from Unsplash (a free stock photo library). If you want to make a pretty app, and you don't have the time to find or create content yourself, GoodBarber can definitely help you with aesthetics.

First, GoodBarber asks you to name and categorize your app. You can't use any special characters—not even spaces—in the name. Next, you'll be asked to create an account (just an email address and a password), before GoodBarber takes you to its app builder.

GoodBarber's app builder is a bit more design-y than Appy Pie's or

Como's, and it doesn't try to lock you out of things like audience stats or general settings before you've created your app. The builder features a large live preview of what your final app will look like, along with seven steps for designing your app, which are located in a menu on the right side of the screen.

Step one is theme: GoodBarber has a collection of about 50 themes, all of which have their own font, background, icons, and colors. The themes look polished and unique, and you can preview your app in a theme before you decide to change it. Step two is navigation layout—GoodBarber lets you pick from eight different layouts, including a cool, colorful typeface menu, a center-text menu, and two different types of slide-out menus. In each menu, you can change the colors of both the text and the icons, as well

as the texture of the icons. If you'd prefer to create your navigation layout from scratch, there's also an option to just enter code.
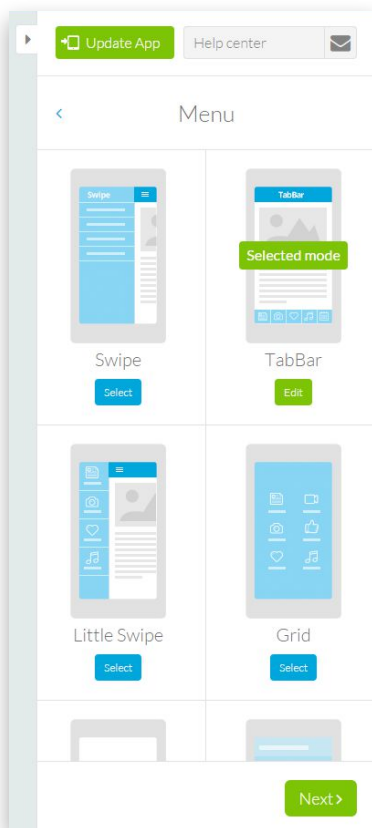
Step three lets you edit the header (swap it out for a picture, or add some fancy effects— iOS only) and body of your app (background, separators, and margins).

After you're done picking out a theme and fixing up the navigation, header, and overall aesthetic of your app, you can start adding content. Good-Barber offers a few different page layouts, including information (about the company, contact us, calendar, map), social media (Facebook, Twitter, Instagram), and e-commerce integrated with Amazon, Shopify, and Etsy. You can also add an Article page, which lets you display blog posts from

Wordpress, Blogger, TypePad, or an RSS feed, or even upload content through GoodBarber's CMS. In other words, this app could be your blog.

I'm a big fan of its last real step, which lets you design your sections. Each page has a few different layouts you can choose from, so you're not stuck with a generic Twitter feed or a list of articles. In Appy Pie and Como, the page layouts are fairly rigid, which means that some pages will inevitably end up looking very cookie-cutter. The last two steps after section design in Good-Barber just involve editing your splash screen and app icon.

You can try out GoodBarber's service for free for 30 days before you're required to upgrade to a paid plan. GoodBarber offers three tiers:

ONCE YOU PICK your theme, you select a layout.

Standard, Full, and Advanced. The Standard plan, which starts at $16 per month, is extremely limited—this plan doesn't let you add any original content, which means you can't have an about page, contact forms, or basically anything that you've created. What you can have is an RSS feed, a website, and social media accounts—so your app will essentially be a hub for users to find your content elsewhere on the web.

The Full plan, which starts at $32 per month, gets you everything you need, including original content. You have access to all of GoodBarber's functionality: Android and iOS support, unlimited push notifications, advanced analytics, and the ability to add internal or third-party ad networks to your app. The Advanced plan, which starts at $48 per month, gets you just a few extras on top of the Full plan—namely,

tablet support (adaptive design) and API access. You can purchase API access on the Standard and Full plans for an extra $4 per month.

If you're willing to pay a little more per month, GoodBarber's apps can really step up your game. You will spend more time creating your app with this service, but you'll also have more tools—including a robust library of fonts and stock photos, as well as a built-in CMS—at
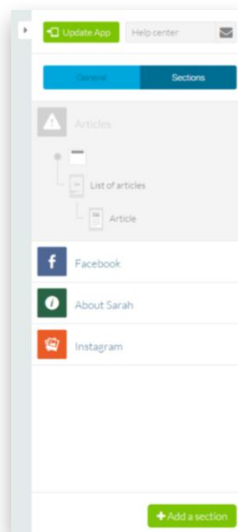
ONCE YOU'VE ADDED your content, you can design what these sections look like.
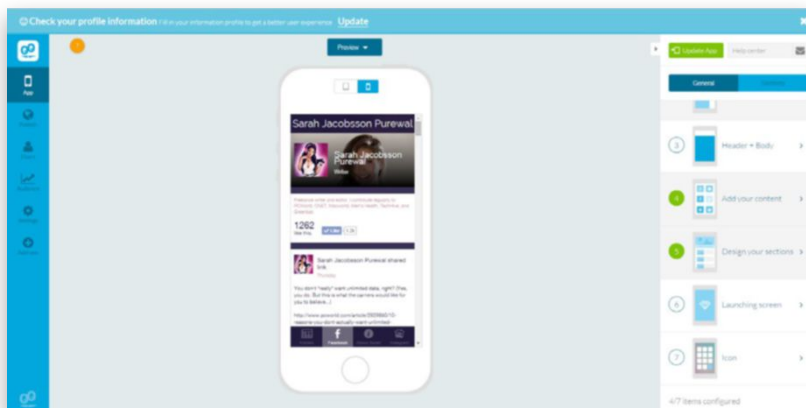
AND, OF COURSE, you can preview what your GoodBarber-based app will look like as you build it.

your fingertips with which to do so.

GO FORTH, AND BE MOBILE

If you're still on the fence about which service to try, you can try all of them—and more. Most DIY app-building services offer a free trial or a limited free account. While you won't be able to submit your app to the App Store for free (though you should still be able to test it out on your own device), you will be able to get an idea of what your app will look like before you commit to a monthly hosting fee.

Oh, and one other note—these monthly fees do not include the cost of an Apple Developer account, which will set you back $99 per year. While Appy Pie, Como, and GoodBar-ber will submit your apps to both the App Store and Google Play for "free," they'll only do so if you provide them with your developer information (a Google Play developer account is a one-time $25 fee). ◼

CREATE

Create a Lightroom slideshow and sync it to your device

Show off your photos with style

BY LESA SNIDER

Adobe Photoshop Lightroom can create some of the slickest slideshows in the west. They're easy to make and incredibly handy for showing off cream-of-the-crop shots at home or at the local photography club, or for using as a digital portfolio.

In this column, you'll learn to create a slideshow that you export and then sync to your iPhone or iPad. Slideshows have a couple advantages over just handing someone your iPhone to flip through your Photos app: You can add captions so they know what they're looking at, and a slideshow has an end point, so they won't keep swiping into images you might not want them to see. Read on!

CREATE A COLLECTION AND ADD CAPTIONS

The first step in making a slideshow is to corral photos into a collection (think album). To do it, open the Library module in Grid view by pressing **G** (or click Library at the top of the Lightroom workspace). Use the Folders or Collections panel at left to locate photos for your show. Select some thumbnails, and then in the Collections panel at left, click the **+** sign and choose Create Collection from the menu that appears. In the resulting dialog box, give the collection a name, turn on Set As Target Collection, and then click Create.
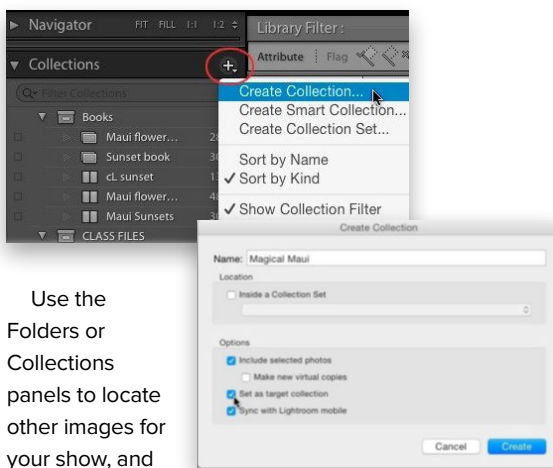
Use the Folders or Collections panels to locate other images for your show, and add them to the target collection by pointing your mouse at a thumbnail and clicking the circle that appears at the upper right. Alternatively, just select a few thumbnails and tap the **B** key on your keyboard. When you're finished, open the collection by clicking its name in the Collections panel. Drag to rearrange the thumbnails into the order in which you want them to play in the show. Next, use the Metadata panel at right to add captions to your images; just select a thumbnail and enter some text into the Caption field.

IF THE IMAGES you want to use live in different folders or collections, create a new collection for the slideshow. Turn on Set As Target Collection so you can quickly add other images to the collection using a keyboard shortcut.
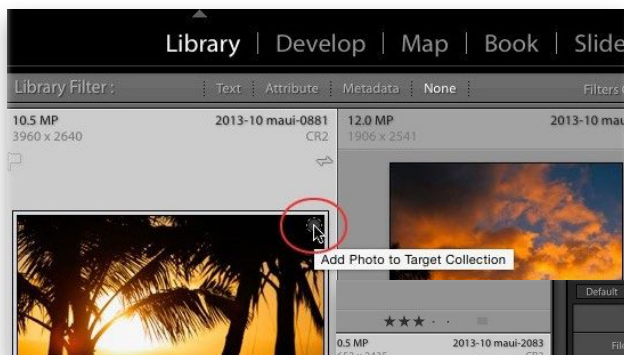
THE ICON CIRCLED here lets you quickly add an image to the target collection (top). The Metadata panel lets you enter captions that can be used by the slideshow module.

FORMAT THE SHOW

Click Slideshow in Lightroom's toolbar and a slideshow preview appears. The slides (images) in your show appear as thumbnails in the Filmstrip at the bottom of the window; just click any thumbnail to view that slide. The Template Browser panel at left has a few slideshow templates to choose from. However, in this example we'll use the panels at right to create a custom look that includes a background image. To start, locate the Options panel at the upper right and turn off Zoom To Fill Frame. Scroll down to the Backdrop panel, turn on Background Image, and turn off Background Color. Drag an image from the Filmstrip into the Backdrop panel (shown right).

To keep the background image subtle, lower the Opacity setting. Next, scroll up to the Options panel, turn on Stroke Border, and set the width to 1 pixel. Click the colored rectangle to open the color picker and click inside the gradient to choose a
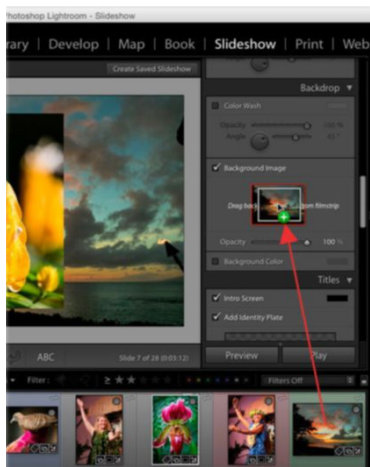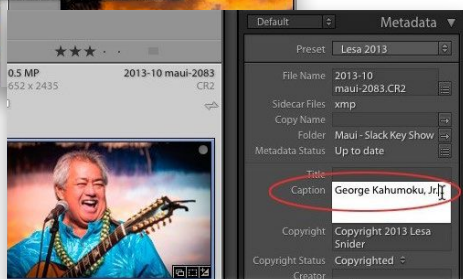
TO ADD A background image, just drag it onto the icon shown here. To keep that image from appearing elsewhere in the show, delete its thumbnail from the Filmstrip.
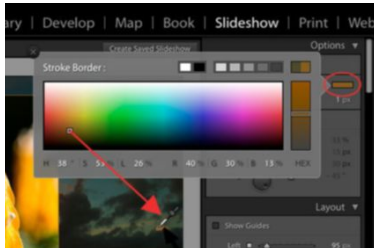
TO LIFT A border color from your image, click and hold within the color picker and then mouse over to a color in your image and release the mouse button to load it.

color. Click the **X** at upper left of the color picker to close it.

Next, scroll to the Overlays panel and turn on Text Overlays. Click the ABC button beneath the slideshow preview and choose Caption from the menu that appears to its right. To format the text, click it to activate the text box and then use the opacity, font, and face controls in the Overlays panel. To change text size, drag a corner handle on the text box itself.

Now let's create an opening and closing slide for branding. Scroll to the Titles panel and turn on Intro Screen, Add Identity Plate, Ending Screen, and Add Identity Plate. Click the down-pointing triangles that appear in the identity plate preview to pick the plate you want to use, and then use the Scale slider to adjust its size. Last but not least, use the Music panel to add music to your show (royalty- or license-free music only) and then use the Playback panel to adjust slide

length, transitions, looping, and so on. Be sure to experiment with all the formatting controls to create a design that's uniquely your own, and then use the Template Browser panel at left to save it as a preset (just click the **+** icon and then give the template a name).

EXPORT AND ADD TO iTUNES

When your show is all set, click Create Saved Slideshow at the upper right of the preview area to save the show in the Collections panel in the Library module. Next, click Export Video at the lower left of the work-space. In the resulting dialog box, enter a name, pick a location, and then choose a video size from the Video Preset menu, and click Export.

Fire up iTunes and choose File → Add to Library. In the resulting dialog

CLICK AND DRAG the yellowish, square handle (circled here) around the perimeter of the image to set the caption's anchor point. Here it's anchored at the lower right.

SCREENSHOTS FROM the final result of this example: The title screen is shown at the upper left, and repeated as an ending screen at the end of the show.

box, locate the video you just exported and click Open. Connect your iPhone or iPad and click its icon toward the upper left of the iTunes window. In the list that appears at left, click Movies and then turn on Sync Movies. Turn on the checkboxes of the videos you want to sync and then click Sync. On your iOS device, the video appears in the Home Videos section of the Videos app.

From this point on, your slideshow travels with you wherever you go. ■

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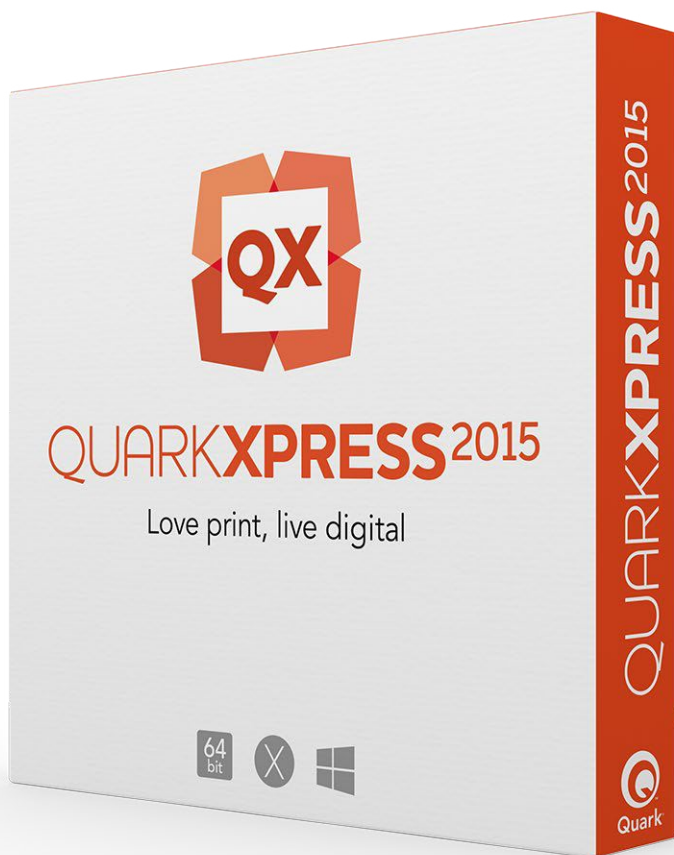
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QuarkXPress 2015: Chock full of new features requested by you

Quark continues to add features requested by QuarkXPress users, making this a must-have upgrade.

BY JAY J. NELSON

The past several versions of QuarkXPress added features that were most requested in Quark's user surveys, and QuarkXPress 2015 continues this strategy. For example, they changed its version numbering scheme to indicate the year of release (otherwise this would be QuarkXPress 11), and the product is still offered with a traditional perpetual license rather than requiring an ongoing rental fee.

QuarkXPress 2015's big new features include Fixed-Layout eBooks, text variables that automatically populate content such as running headers, a new table feature with Excel integration, automatic footnotes and endnotes, and PDF/X-4 output.

EPUB ENHANCEMENTS

A large portion of Quark's user base produces corporate communications, financial reports, books, and other publications. QuarkXPress 2015 enhances these kinds of workflows. (In many companies, QuarkXPress is just one part of a multi-stage automated system that produces electronic, printed, and web documents.)
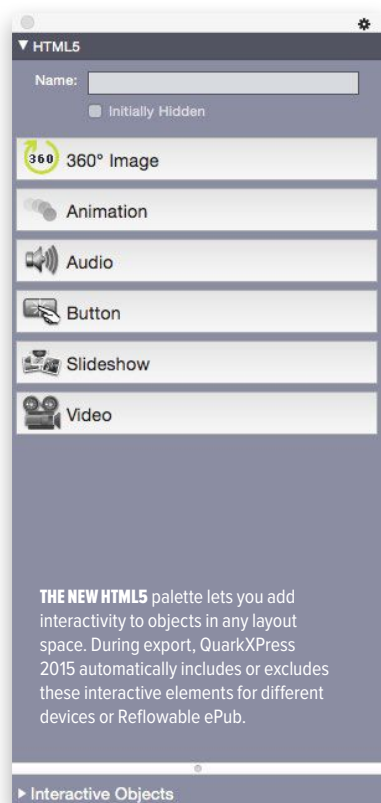
The ePub format has two variants: Reflowable, commonly used for novels, textbooks, and other simple text-and-pictures publications; and the newer Fixed Layout ePub, the preferred format for publications whose layout is as important as its text and pictures—for example, children's books, travel guides and
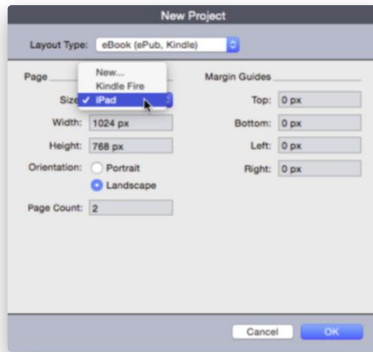
TO ASSIST in creating a Fixed Layout ePub, QuarkXPress 2015 provides standard device page-size options, such as iPad and Kindle Fire.

cookbooks.

The eBook layout space in QuarkXPress 2015 supports both Fixed and Reflowable ePubs. (While you cannot export a Fixed Layout ePub from an existing Print layout, you can still build a Reflowable ePub from an existing Print layout.) There are benefits and drawbacks to this forked approach, and its value depends on your existing content and future plans. The main benefit to Quark's approach is that you can design one layout for your eBook and let QuarkXPress optimize its page size and special features for

THE NEW HTML5 palette lets you add interactivity to objects in any layout space. During export, QuarkXPress 2015 automatically includes or excludes these interactive elements for different devices or Reflowable ePub.

each output format.

Once inside your new eBook document, you can use all the rich layout tools in QuarkXPress, including sharing Style Sheets, Colors, Item Styles, Footnote Styles, and other attributes across Print, App Studio, and eBook layouts. This makes it much easier to keep an identity consistent across multiple layouts.

Four years ago, Quark's App Studio was the first user-friendly tool to convert publications into complex, interactive iOS apps. With the recent ratification of the EPUB 3 standard, Quark has now migrated their HTML5-based App Studio tools into all the QuarkXPress 2015 layout spaces (Print, eBook, and App Studio). This means that you can now use the familiar App Studio interface to build interactivity into ePub files—including Audio, Video, Slideshows, Animations, 360-degree images, and Buttons.

The existing Reflowable ePub features have also been dramatically enhanced. For example, you can now apply an unlimited number of Style Sheets; CSS styles are automatically generated from QuarkXPress Style Sheets; you can use the new HTML5 palette to add audio and video interactivity to items; you can include items on the Pasteboard in the reflow (for example, to use a different picture in the ePub than in the print document); you can use Callout Anchors to insert pictures into the text flow without needing to split the Story into multiple components; and you can tag and export to Reflowable ePub from App Studio layouts. A variety of tagging functions have also been streamlined to make converting to reflow a less tedious experience.
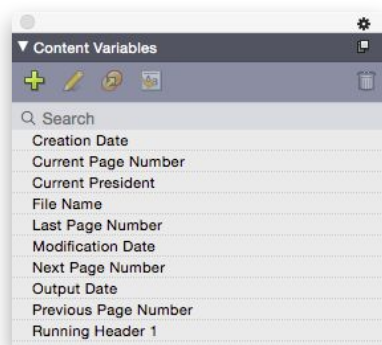
CONTENT VARIABLES

Previous versions of QuarkXPress let you repeat common text throughout multiple layouts, so that when you change one, they all change. Now you can also create Content Variables that grab information from one place and display it elsewhere. A common use is to generate a running header that displays a chapter or section title, which is pulled from document text formatted with a specific style sheet. Another is to refer to the location of an object elsewhere in the document, including its page number (even if that changes), and a hyperlink to it.

FOOTNOTES AND ENDNOTES

QuarkXPress 2015 can create both footnotes and endnotes, as well as import them from a Microsoft Word

A HANDFUL of useful content variables are included, and you can create your own custom variables—such as the Running Header 1 and Current President created here.
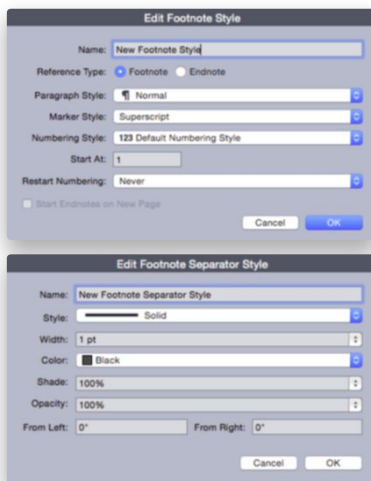
document. (Footnotes commonly appear at the bottom of a text box, column, or page, while endnotes appear at the end of a section or chapter.) This feature is smart enough to continue a long footnote on the next column or page if it doesn't entirely fit on the current one.

TABLE ENHANCEMENTS

The table feature in QuarkXPress was long overdue for an overhaul. But rather than enhancing the existing table feature, Quark chose to create a new Inline Table feature. You can apply a table style to inline tables, which keeps multiple tables formatted similarly, and the table data can be linked to an external Excel spreadsheet.

These new tables must be placed

as items inside the flow of a text box, which makes it easy to automatically export them into Reflowable ePub documents. The content of an inline table behaves much like the content of a picture box: you can change some qualities of its appearance in QuarkXPress, but the actual data can only changed by editing the file it's linked to. So, to change the text in an inline table, you must edit the Excel spreadsheet and then update the table using the Usage dialog box in QuarkXPress.

VERIFIED PDF/X-4 OUTPUT

Printing professionals have been clamoring for QuarkXPress to output to the PDF/X-4 standard for quite some time. This PDF standard supports
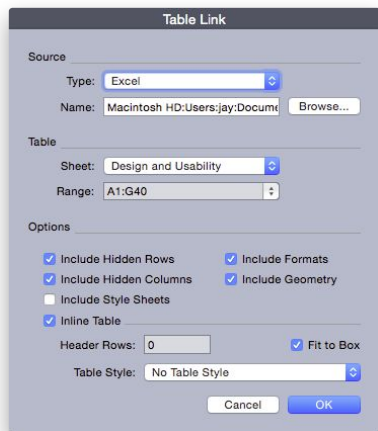
WHEN YOU link to an external Excel spreadsheet, you can import its existing style sheets or use a table style you created in QuarkXPress.

AS WITH MOST Styles in QuarkXPress, you have control over the smallest details of a Table Style.

native transparency and DeviceN as the output color model, which creates smaller PDF files that print faster and are essential to some workflows. Specifically, imported graphics in PDF, AI, and PSD format maintain their native transparency when exported from QuarkXPress. This issue is so important that the default PDF Output style in QuarkXPress 2015 has been changed to export native transparency instead of flattening it.

SUPPORT FOR LEGACY DOCUMENTS

One important issue must be noted: QuarkXPress 2015 will only open documents last saved by QuarkXPress version 7 or higher. If you have older documents, be sure to download Quark's free QuarkXPress Document Converter application (go.macworld.com/converter) that opens

legacy files from versions 3 to 6 and saves them in a format that QuarkX-Press 10 and 2015 can open.

In addition, Quark has dropped support for the bitmapped frames available in earlier versions of QuarkXPress. When you open a legacy document that uses one of these frames, QuarkXPress 2015 alerts you that these frames are no longer supported. There is no easy workaround.

THE SMALL IMPROVEMENTS

Every mature application benefits by refining the ways its daily users interact with it. Having completely overhauled the QuarkXPress inter-face several versions ago, Quark has now improved many of the rough spots identified by its users. The first change is that there is no installer—instead, you simply drag the applica-tion to your Applications folder. Another under-the-hood change will be enjoyed far longer: QuarkXPress 2015 is now a 64-bit application, so it can make better use your computer's RAM. This results in dramatically faster viewing of imported graphics and exporting of PDFs, and since the text engine is now multi-threaded, you can more fluidly work with complex text objects such as tables.

Pages can now be much larger: up to 224 by 224 inches instead of the previous limit of 48 by 48 inches, and
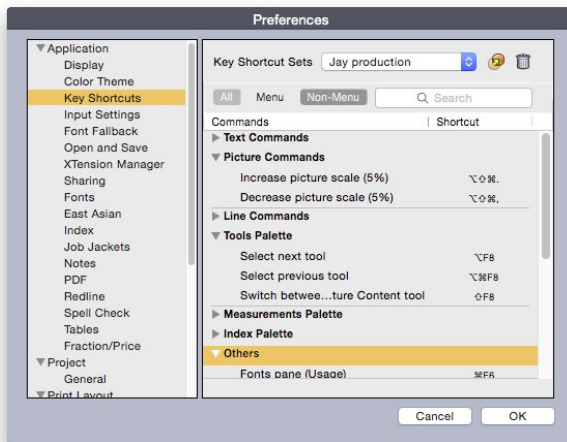
you can now save named, custom-size presets for new layouts. To accommodate these larger page sizes, you can now scale pictures up to 5000 percent.

Additional small improvements make creating your layouts much more fun. For example, a new Format Painter lets you copy attri-butes from text and apply them to other text. You'll find it in the Home and Character tabs of the Measure-ments palette, and it also has keyboard shortcuts. Speaking of which, you can now assign or change keyboard shortcuts for menu items or other actions, and save them as custom sets.

You can also now filter the items in the Style Sheets, Colors, Hyperlinks, and Content Variables palettes by name, which is handy since these

THE NEW Mac-only Key Shortcuts preference lets you add and change shortcuts, and is especially helpful for seeing all the shortcuts in QuarkXPress—for the first time ever.

palettes can often be quite lengthy. Thankfully, WYSIWYG font menus can once again be disabled—QuarkXPress 10 had inexplicably removed that ability.

Other practical improvements include the ability to automatically view a PDF after exporting it, and the ability to collect all the assets from all the layouts in a project by using Collect For Output—previously, only the assets from the current layout could be collected. You can now use the Usage dialog to relink any imported picture to a different picture file, and the Usage dialog now displays filenames without cropping long names to fit.

BOTTOM LINE

QuarkXPress 2015 is a valuable upgrade for QuarkXPress users who make ePub files, work with lots of tables or footnotes, or need running headers. By also providing the top 10 most-requested feature improvements, Quark has made this an upgrade every user will want. ■

"SURE, AT FIRST I WAS A LITTLE TAKEN ABACK BY THE WHOLE PEEING STANDING UP THING. BUT I TAUGHT HIM TO THROW A STICK AND NOW HANGING OUT WITH HIM IS THE BEST PART OF MY DAY."

—EINSTEIN
adopted 12-09-10

A PERSON IS THE BEST THING TO HAPPEN TO A SHELTER PET

adopt

theshelterpetproject.org

Mac 911

Solutions to your most vexing Mac problems.

BY GLENN FLEISHMAN

Solving OS X problems

Mac 911 focuses on OS X and things that are missing or migrating. I answer
questions about deauthorizing software on a Mac before a migration, where
to find old Wi-Fi utility software and firmware, deleting a Fusion drive's extra
partition, and a small array of Migration Assistant questions.

Deauthorizing OS X software before a transition

Q: Is there a place on OS X Yosemite to find programs that are currently authorized on my Mac? I am specifically interested in those that must be deauthorized before moving to a new device. I'm already aware iTunes must be.

—Philip Shook

A: As Philip notes, iTunes lets you deauthorize a computer (Account ➝ Deauthorize This Computer). Doing so frees up a slot in the total count of five computers that you can use the same music and videos on with the same iTunes account.

For general software, if it's purchased from the Mac App Store, there's no requirement to deauthorize. As Jason Snell wrote in 2011 when the Mac App Store appeared, there's no limit on the number of Macs using the same Apple ID that can use software purchased using that Apple ID.

Some individual software packages handle this differently. If you use Adobe software, particularly its Creative Cloud suite, you have a limit as to the number of Macs for which you can be authorized at once. It's best to use the built-in tool to disconnect before switching to a new computer. In Creative Cloud, click its
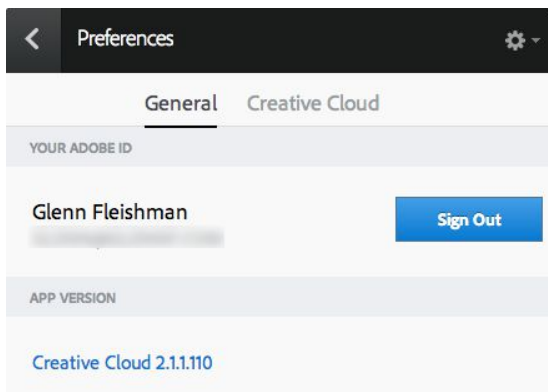
menu-bar icon or bring up its window, click the gear (Settings) icon, choose Preferences, and click Sign Out.

If you own any other professional software packages, it's worth checking their policies individually, but for any software that has to check in with an Internet server to validate that it can be used, you can almost always use a website or the software itself to disable its use on other computers.

Where did AirPort Utility go?

Q: I have a 13-inch laptop at home using previous AirPort Utility software. I lost it by using "clean my Mac" software. How do I restore the lost program?

—Silvain Gilbert

A: Apple updated its AirPort Utility from version 5, which runs on pre-Lion Macs,

CREATIVE CLOUD DEAUTHORIZES a computer when you sign out from its helper app**..**

to version 6 in 2012. Version 5 also ran on Lion and, if memory serves, Mountain Lion. If you're running an older version of OS X, you may need version 5.5.3 or 5.6.1.

Although Apple doesn't make most of its utility software available separately—you have to reinstall OS X or copy an application from another Mac—it does have the entire history of AirPort firmware and utility software available for download (go.macworld. com/appleairportsw). You can sort through that page to find the appropriate version. Click Load More Results at the bottom if you don't see the version you need.

Also note that Apple is retro: the AirPort Extreme Card shown here was for sale from about 2003 to 2009 for late-generation PowerPC-based Macs.

Repartitioning a drive to remove a partition

L. Faye Russell had to set up separate Mavericks and Yosemite bootable partitions in order to deal with crashing programs in Yosemite. However, the Mac used a Fusion drive (go.macworld. com/fusiondrive), and that presented an issue.

Q: **I would like to delete the Mavericks partition and expand the Yosemite partition to encompass the entire internal hard drive (i.e., return my hard drive to a single partition). However, the controls for doing this in Disk Utility are all unavailable.**
—L. Faye Russell

A: Normally, if you use the GUID Partition Scheme to format a drive— it's the default format for new Macs— you can create and resize partitions at will. A drive is a physical thing, while partitions are "soft" or "logical," managed by the startup firmware (EFI) and operating system.

But Fusion is a finicky beast. For those who don't have a Fusion drive, it's a combination of fast SSD storage and a slower hard disk. OS X automatically optimizes storage so that more frequently used files move to the SSD. This gives you some of the advantages of SSD, such as fast startup time, without the expense of an SSD the size of your entire volume, nor having to manage moving files around yourself or fit the entire OS on your startup SSD volume.

Apple notes that you can only create a single partition (support.

apple.com/en-us/HT202574) on a Fusion drive, and Disk Utility places this separate partition exclusively on the hard drive. Once created, Apple offers no advice, nor can I find anyone with advice to offer, on deleting the partition without fully erasing the drive. Since you have a Fusion system, you'd also want to be sure to initialize it via OS X Recovery, which can correctly restore the state.

A recent Mac 911 provides details on cloning and restoring (go.mac-world.com/cloning) an OS X volume. It's tedious, but it would regain your lost storage.

Migration troubles

Q: I'm trying to restore a Time Machine backup of late 2009 MacBook that was running Yosemite to a mid-2010 MacBook currently running Lion. Should I update the 2010 MacBook to Yosemite first?
—Mike Imbrogno

A: I don't believe it's ever possible to use a newer Time Machine backup to restore to an older version of OS X. You might be able to retrieve files and not the entire system, but even then, I'd worry that there would be an incompatibility.

For best results, upgrade to Yosemite first, since it sounds like that's what you're planning. If you

intend to wipe the 2010 MacBook for Yosemite, you can then restore from the Time Machine backup during the setup process.

Sarah Melling migrated from a Windows PC to a Mac, and all the creation and modification dates were lost on her artwork files, which she uses for finding and sorting. Unfortunately, there's no way to solve this in migration, and since you've already transferred the files, you probably want a way to fix it.

A Better Finder ($15, publicspace. net/ABetterFinderAttributes) has the option to read EXIF data from some image formats, which is metadata stored by cameras and other software that can include the creation date. If your files have the creation data embedded in this way, A Better Finder can modify selected files to

OUR READER'S ILLUSTRATION of the problem with being unable to delete a partition on a Fusion drive.

have a Finder-created date that matches that embedded information.

You could also try File Date Changer 5 ($9, publicspace.net/ FileDateChanger), which allows changing the dates on one or more files as a batch, though you have to specify the dates manually. This feature is included in A Better Finder.

Q: **I've been migrating files from Mac to Mac for about 20 years now. I'm going to get a new iMac this summer. Is it better to start fresh and just copy files/folders, or does it matter?**

—Caryn Cameron

A: It's a mixed bag. I've also been migrating Macs for many years, and I typically use Migration Assistant as it's generally improved enough that I can rely on it to copy everything.

With the 12-inch MacBook, however, both Macworld executive editor Susie Ochs and I hit a stalling problem the first time we tried. Ted van den Bergh had a similar problem:

Three times I tried to transfer the Applications folder, and the Migration Assistant does all the work as you would expect, then stops with the finish in sight. Less than one minute to go...nothing happens.

In my and Susie's case, we had to force a shutdown, restart, and try again. Then it worked for each of us the second time. Several colleagues have told us they've experienced the same thing, and it may have to do with a timeout related to iCloud logins.

More Photos Q&A

At WWDC, Apple said that Photos will be updated in OS X 10.11 El Capitan with new features. Until then (and unless you upgrade), we're still using the sometimes manky version in Yosemite, which I'm still holding out hope Apple releases additional fixes for, rather than defer everything to El Capitan.

More answers to what you can't do, what you can, and what's not working: deleting old files, getting an import to finish, copying and paste, and sharing to Facebook.

What can I delete?

It's clear that Photos' approach of using hard linking is confusing because people continue to ask questions about what they can delete. Steve Kramer's is a good example. "Besides Photos Library, I also have iPhoto Library and 'My Pictures.' Can I delete

all but the new Photos Library?"

Jason Snell explained this () in depth, but it's not the easiest concept to leap to mind. Instead of importing files from iPhoto when you upgrade a library to the same volume, Photos makes a new link to the same file. In the Finder, it looks just like another file. In order to delete the original file, all links to it have to be deleted.

However, I myself am a little wary of throwing away my old iPhoto directory in case I find there was an import problem later. I'd rather have a little overlap—iPhoto has its own database format and thumbnails—than accidentally lose pictures Photos glitched on bringing in.

If the My Pictures file or folder isn't a special iPhoto or Photos library, it likely wasn't imported, and you'll need to follow our tips on merging, which you can find in Jason's column.

Can't finish importing

I have a pile of emails from readers with import problems, even weeks in and after the micro-update from Apple for Photos. Joe Dodd's is typical: "I can't get my iPhoto library to finish moving to photos. It freezes up the entire Mac at 11 to 15 percent completion. The Mac is older, but now I don't know what to do."

These sorts of problems are maddening because there's not enough information for you to know what to test or fix. I have a few strategies you can try:

> Run Disk Utility, pick the volume

iPHOTO LIBRARY MANAGER isn't free, but for $30 it could make your life a lot easier if you're having problems importing or merging old libraries.
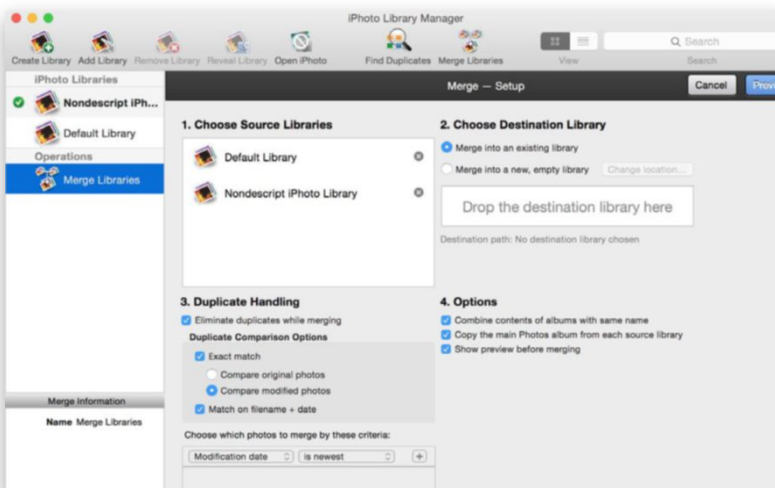
on which the library resides, and click Repair Disk Permissions. This fixes a multitude of strange issues with OS X software, where files mysteriously don't have the right read/write access, and yet the software doesn't complain about it—it just stalls or fails. (You might also try Verify Disk, and see if errors show up. If so, you'll need to recover that volume.)

> Try rebuilding the iPhoto library. Apple has advice in a support note (support.apple.com/en-us/HT201769).

> Copy the iPhoto library to another disk drive, and try the import there to a Photos library you save on that same drive.

> Get a copy of iPhoto Library Manager ($30, fatcatsoftware.com/iplm), which can help rebuild or recover photos. You might wind up exporting a new iPhoto library and then try to import that.

Downsampling in copy

Ole Karstad liked to use copy and paste from iPhoto to other software. However, in Photos he only gets a small image this way. He wonders if there's a workaround.

Unfortunately, this appears to be the new default and unchangeable behavior in Photos. If you select a photo and the Edit ➔ Copy menu is available (which it typically is), Photos automatically downsamples to 1024
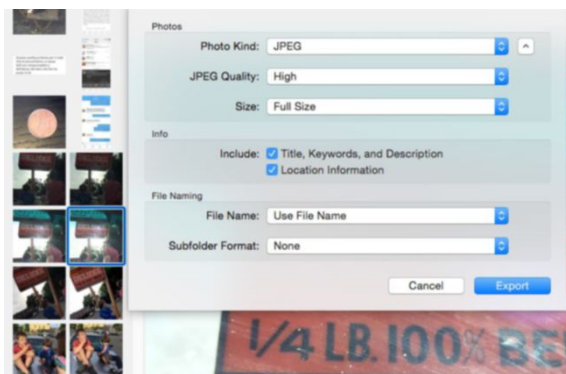
pixels maximum in the longest dimension in my test.

To use a different resolution, you have to select the photo and choose File ➔ Export ➔ Export 1 Photo. Choose Export Unmodified if you want the original without any changes you might have made through the editing options in Photos; that corresponds to exporting Original in iPhoto.

You can also drag the image or a set of images to the Finder, which keeps the full resolution, and converts everything but GIF, JPEG, and PNG files (such as RAW camera files) to a JPEG.

I do not 'like' this Facebook export

Lowell Nelson tried a number of ways to get Photos to play nicely with his workflow for posting images to Facebook. But Apple seems to have left out too much integration to make his life easy—the ability to select

COPY AND PASTE IN PHOTOS downsamples your image to no more than 1024 pixels on the longest side. Use File ➔ Export or drag the image to the Finder to get a full-resolution copy out of the app.
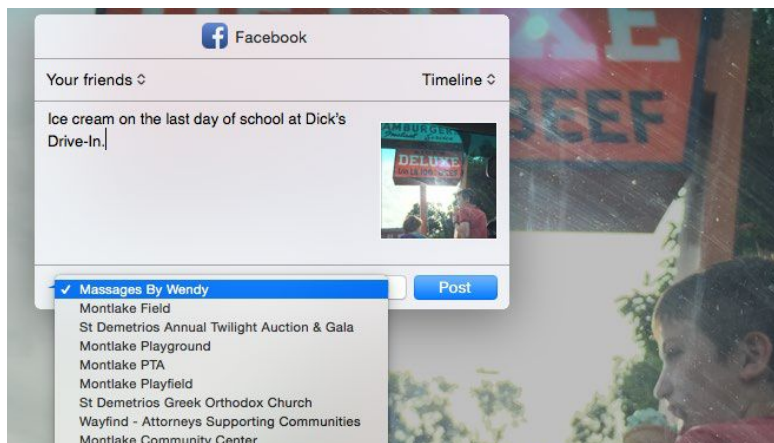
images from within Photos from other apps or the Finder just isn't there yet. (It probably will be in El Capitan.)

Lowell tried the Add Photos/Video picker in Safari and Firefox from his Facebook page. Nope. He tried dragging a photo from Photos into the Facebook app's page—but the browsers both interpret this as a link, not an image.

While Photos has a built-in Share ➜ Facebook option at the upper right, he notes, "This only works if you don't want to tag anybody or set the location of your post. When I try to set location I only get suggestions of locations that are near the location of my Mac, not access to all of Facebook locations, and no tags available."

His workaround? He drags a photo to the desktop to make it a file he can manipulate. (Exporting would work, too, with more steps but more control over the image size.)

I still see iPhoto as an option in various apps, Apple's and others, and, as Lowell also found, Mail is one of the few programs updated to let you use a Photos media browser as well as an iPhotos one. ∎

Ask Mac 911

We're always looking for problems to solve! Email us at mac911@macworld.com, tweet them at me (if brief) @glennf, or call 206-337-5833 and leave a voicemail message. (We'll be experimenting with some audio in the future, and may put your question "on the air.")

Mac 911 can't provide direct email responses or answers for every question. For that, turn to Apple-Care, an Apple Store Genius Bar, or the Apple Support Communities.